







INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

Primary Grade 4

Term 2

2021-2022

Teacher's Guide

Introduction

تشهد وزارة التربية والتعليم والتعليم الفني مرحلة فارقة من تاريخ التعليم في مصر، فقد انطلقت إشارة البدء في التغيير الجذري لنظامنا التعليمي بدءًا من مرحلة رياض الأطفال حتى نهاية المرحلة الثانوية (التعليم 2.0). لتبدأ أول ملامح هذا التغيير من سبتمبر 2018 عبر تغيير مناهج مرحلة رياض الأطفال والصف الأول تلاها الصفين الثاني والثالث الابتدائي. وفي 2021 بدأنا في تغيير منهج الصف الرابع الابتدائي وسنستمر في التغيير تباعًا للصفوف الدراسية التالية حتى عام 2030 ، إذ نعمل على إحداث نقلة نوعية في طريقة إعداد طلاب مصر ليكونوا شبابًا ناجحين في مستقبل لا يمكننا التنبؤ بتفاصيله.

وتفخر وزارة التربية والتعليم والتعليم الفني بأن تقدم هذه السلسلة التعليمية الجديدة، فضلًا عن المواد التعليمية الرقمية التي تعكس رؤيتها عن رحلة التطوير. ولقد كان هذا العمل نتاجًا لكثير من الدراسات والمقارنات والتفكير العميق والتعاون مع الكثير من علماء التربية في كل من المؤسسات الوطنية والعالمية لكي نصوغ رؤيتنا في إطار قومي إبداعي ومواد تعليمية ورقية ورقمية فعالة.

وتتقدم وزارة التربية والتعليم والتعليم الفني بكل الشكر والتقدير لمركز تطوير المناهج والمواد التعليمية ومديرته وفريقها الرائع على وجه التحديد، كما تتقدم بالشكر لمستشاري الوزير وكذلك مديري عموم المواد الدراسية، وكذلك تخص بالشكر والعرفان مؤسسة ديسكفري التعليمية، ومؤسسة ناشيونال جيوجرافيك للتعليم، ومؤسسة نهضة مصر، ومؤسسة لونجمان مصر، ومنظمة اليونيسف، ومنظمة اليونسكو، والبنك الدولي لمساهمتهم في تطوير إطار المناهج الوطنية بمصر، وكذلك أساتذة كليات التربية المصرية لمشاركتهم الفاعلة في إعداد إطار المناهج الوطنية في مصر. وأخيرًا تتقدم الوزارة بالشكر لكل فرد في قطاعات وزارة التربية والتعليم الذين ساهموا في إثراء هذا العمل.

إن تغيير نظامنا التعليمي لم يكن ممكنًا دون الإيمان العميق لدى القيادة السياسية المصرية بضرورة التغيير، فالإصلاح الشامل للتعليم في مصر هو جزء أصيل من رؤية السيد الرئيس عبد الفتاح السيسي لإعادة بناء المواطن المصري. ولقد تم تفعيل تلك الرؤية بالتنسيق الكامل مع السادة وزراء التعليم العالي والبحث العلمي، والثقافة، والشباب والرياضة. إن نظام التعليم (2.0) هو جزء من مجهود وطني كبير ومتواصل للارتقاء بمصر إلى مصاف الدول المتقدمة لضمان مستقبل عظيم لجميع مواطنيها.

كلمة السيد وزير التربية والتعليم
والتعليم الفني

يسعدني أن أشارككم هذه اللحظة التاريخية في عمر مصرنا الحبيبة والتي تمثل استمرارًا لانطلاقة نظام التعليم المصري الجديد، والذي تم تصميمه لبناء إنسان مصري منتمٍ إلى وطنه وإلى أمته العربية وقارته الإفريقية، مبتكر، ومبدع، يفهم ويتقبل الاختلاف، ومتمكن من المعرفة والمهارات الحياتية، وقادر على التعلم مدى الحياة وقادر على المنافسة العالمية.

لقد آثرت الدولة المصرية أن تستثمر في أبنائها عن طريق بناء نظام تعليم عصري بمقاييس جودة عالمية، من أجل أن ينعم أبناؤنا وأحفادنا بمستقبل أفضل، وكي ينقلوا وطنهم "مصر" إلى مصاف الدول الكبرى في المستقبل القريب.

إن تحقيق الحلم المصري في التغيير مسئولية مشتركة بين مؤسسات الدولة أجمعها ، وأولياء الأمور والمجتمع المدني والتعليم الخاص ووسائل الإعلام في مصر. وهنا أود أن أخص بالذكر
السادة المعلمين الأجلاء الذين يمثلون القدوة والمثل العليا لأبنائنا، ويقومون بالعمل الدؤوب لإنجاح هذا المشروع القومي.

إنني أناشدكم جميعًا أن يعمل كل منا على أن يكون قدوة صالحة لأبنائنا، وأن نتعاون جميعًا لبناء إنسان مصري قادر على استعادة الأمجاد المصرية وبناء الحضارة المصرية الجديدة.

خالص تمنياتي القلبية لأبنائنا بالتوفيق، واحترامي وتقديري لمعلمي مصر الأجلاء.

الدكتور طارق جلال شوقي
وزير التربية والتعليم والتعليم الفني

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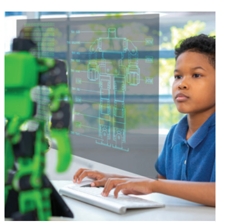
Scope and sequence



THEME 3 DIGITAL CITIZENSHIP

Essential Question: How can ICT tools benefit our lives?

LESSON	TOPICS	SKILLS INTEGRATION		
		Life Skills	Values	Issues and challenges
LESSON 1 Explorer in Action	• The use of digital technology in daily life • Virtual communities • Digital citizenship	**Learning to know:** critical thinking; formulate questions	**Academic values:** appreciation of technology	**Globalization issues:** digital citizenship
LESSON 2 Digital citizenship	• Digital citizenship • The safe and ethical use of ICT tools	**Learning to be:** sharing **Learning to live together:** communication	**Co-existence values:** tolerance and acceptance of others	**Globalization issues:** digital citizenship **Citizenship issues:** awareness of rights and responsibilities
LESSON 3 Positive impacts of ICT	• The benefits of ICT • Education 2.0 and the Egyptian Knowledge Bank • Ways to support ICT in the learning process.	**Learning to be:** sharing **Learning to live together:** communication	**Work values:** proficiency; cooperation	**Globalization issues:** technological awareness **Discrimination issues:** Equal access for people of determination
LESSON 4 Internet communication	• Online communication • Difference between synchronous and asynchronous communication	**Learning to know:** critical thinking **Learning to live together:** communication	**Academic values:** appreciation of technology	**Globalization issues:** civilizational communication
LESSON 5 How to use e-communication	• E-communication etiquette • Video chats, email, and other forms of online communication • ICT proficiency	**Learning to be:** empathy **Learning to do:** cooperation	**Co-existence values:** respect	**Globalization issues:** civilizational communication
LESSON 6 Online learning environments and sources	• Virtual labs, interactive maps, and other online environments • The use of online sources in academic research	**Learning to do:** negotiating **Learning to know:** problem solving	**Work values:** perseverance	**Globalization issues:** digital citizenship
LESSON 7 Planning digital searches	• How to plan and conduct research online • How to present information using online sources • How to tell the difference between reliable and unreliable sources	**Learning to do:** productivity **Learning to know:** creativity	**Personal values:** independence **Academic values:** objectivity, curiosity, and honesty	**Citizenship values:** participation in scholarly research
LESSON 8 Synchronous and asynchronous communication	• Communication that involves ICT tools • How to use synchronous and asynchronous communication with teachers and classmates • How to report findings using digital tools	**Learning to do:** decision making **Learning to know:** critical thinking	**Work values:** transparency and integrity **Personal values:** independence	**Citizenship values:** participation in scholarly research



THEME 4 SOFTWARE PROJECTS

Essential Question: How can different software programs help us?

LESSON	TOPICS	SKILLS INTEGRATION		
		Life Skills	Values	Issues and challenges
LESSON I Explorer in Action	• Different kinds of software • HApplying ICT applications in (research, games,..) • How ICT tools are helping animals around the world	**Learning to do:** productivity; setting goals **Personal values:** accountability; setting expectations	**Work values:** cooperation **Personal values:** compassion	**Environment and development issues:** environmental responsibility; sustainable development
LESSON 2 Problem-solving skills	• The steps involved in problem-solving • How to analyze and solve problems	**Learning to know:** critical thinking; problem solving	**Work values:** cooperation	**Citizenship issues:** belonging **Environment and development issues:** social participation
LESSON 3 Presenting information to others	• Tools and techniques for presenting information • Design concepts	**Learning to do:** decision making **Learning to be:** sharing	**Academic values:** curiosity	**Environment and development issues:** environmental pollution; sustainable development
LESSON 4 Digital applications	• How to evaluate sources found via search engines • Problem-solving • How to use Word and Excel	**Learning to know:** critical thinking; creativity	**Personal values:** independence	**Globalization issues:** technological awareness
LESSON 5 Algorithms	• The concept of algorithms • How a search engine uses algorithms • How to solve a problem using an algorithm	**Learning to live together:** means of communication **Learning to know:** problem solving	**Academic values:** appreciation of mathematics	**Globalization issues:** digital citizenship
LESSON 6 The principles of coding	• The concept of coding • Coding and how it helps to solve problems	**Learning to know:** creativity	**Work values:** proficiency **Academic values:** appreciation of mathematics	**Globalization issues:** civilizational communication
LESSON 7 Graphic art	• How to use graphic editors • How to add and edit photos • How visuals can help a presentation	**Learning to live together:** reviewing goals	**Work values:** perseverance	**Globalization issues:** technological awareness
LESSON 8 Creating a PowerPoint presentation	• Important elements of a presentation • PowerPoint features	**Learning to live together:** means of communication **Learning to do:** creating a set of instructions	**Work values:** perseverance **Personal values:** independence	**Globalization issues:** technological awareness

About Information and Communication Technology

Information and Communication Technology (ICT) teaches the Egypt Ministry of Education curriculum for Primary 4 learners. Through thought-provoking stories, photography and video, *ICT* profiles experts in technology as role models for students to emulate. *ICT* lessons and concepts help students learn to use technology for success in life.

Components
The course comprises these elements:

- A combined Student Book and Activity Book
- An e-book
- A Teacher's Guide with educational tasks, exercises and teaching procedures
- Downloadable worksheets
- Videos

The Aims of the Course
This course provides Grade 4 students with the skills they will need to use digital technology safely and effectively. Filled with practical, relevant content, this course helps students learn and put into practice higher-order thinking skills including critical thinking, communication, creativity, teamwork, leadership, and self-awareness. By developing higher-order thinking skills as well as learning how to become strong life-long learners, students will be well-prepared for their own future and to become productive members of society.

Course Structure
The course is divided broadly into four **themes** over the academic year, with each term covering two themes. Each theme addresses a broad concept from the Ministry of Education curriculum.

Each theme is subdivided into **lessons**.

Each lesson consists of 2 two-page spreads, which cover 45 minutes of class time and includes both instruction and exercises and concludes with a review and a self-assessment.

TERM 2

Theme 3: Digital citizenship (8 lessons)
Students learn what it means to be a digital citizen, how ICT tools can help them in their lives and the different ways they can use them to communicate. They will discuss good digital etiquette, and how to find reliable sources online, and explore these topics through activities like drafting an email message or looking up topics on the internet.

Theme 4: Software projects (8 lessons)
With a cross-curriculum element of the scientific method, students will apply problem-solving skills and following a process to ICT issues. They will learn how to share and present their ideas, having learned how to research them in the previous Theme. Specific guidance is given on Microsoft Office applications. Students are introduced to the basic principles of coding as well as graphic art. This Theme ends with a 'how-to' guide for step-by-step instructions on using Word and Excel.

THE FEATURES OF THE COURSE

❋ Each theme provides the following:

Theme Opener: Each theme opens with an engaging visual image to introduce the theme and to capture students' interest. Theme openers also feature the Essential Question.

The Essential Question: This is a broad inquiry into the theme to raise students' interest. Each lesson studied will provide further insight into this question. Students will return to the Essential Question in the Theme Review.

Theme Reviews: Each theme concludes with a two-page review to help students summarize and apply the most important information and skills presented throughout the theme. The Review at the end of a theme also enables students to answer the Essential Question which was first asked on the Theme Opener page.

Projects: At the end of each term, students work collaboratively on a project related to the theme, through which they can apply the personal skills they acquired to the academic content. The projects allow students to engage their creativity and apply the material in a personally meaningful and relevant way.

Explorer in Action: At the beginning of each theme, students are introduced to a famous professional, so students can study a concrete example of an influential role model. These lessons also include a video featuring the explorer, describing their work in their own words.

Videos: The Explorer in Action lessons feature engaging videos.

❋ Each lesson provides the following:

Objectives: At the start of each lesson, students see what they will learn.

Engage: This is a broad question to introduce students to the lesson topic.

Learn: Information is presented through texts.

Explore: This enables students to discuss the lesson topic further or do a short task related to the content.

Review (for part I of the lesson): These contain three questions. They relate to the lesson objectives, the life skills, values or issues and challenges in the lesson (see below) or a personalization question, so enabling students to relate the lesson contents to their own lives.

Learn by Doing: Students apply the information they just learned in a practical way, such as carrying out a task or completing a graphic organizer.

Review (for part 2 of the lesson): Students summarize and consolidate the information from the lesson. These are two questions.

Self-assess: At the end of the lesson, students check their progress against the Lesson Objectives.

Life skills, **Values, and Issues and Challenges:** Skills in these areas are integrated into each lesson, and are clearly marked in the Table of Contents and in the Teacher's Guide.

Creating an inclusive classroom

Education, in the age of information and teaching technologies, supports the learner's particular needs and takes into consideration his knowledge background and his personal abilities. The main mission of teaching special needs students now is to teach them how to learn and adapt to their society and face their lives. That's the reason behind our interest in developing a Teacher's Guide that aims to:

- support the teachers in teaching students with minor disabilities integrated in regular schools;
- provide high quality education for everyone without discrimination;
- achieve a general development of learners in regards to their physical, mental and emotional health, as much as their abilities and capacities allow it, in addition to giving them the right amount of essential knowledge;
- create a supportive and motivating educational environment, which helps integrated SEND students fit into society inside and outside the school.

ICT is considered one of the factors that help provide equal opportunities for disabled children, strengthen educational and social integration, adjust to the requirements of the era, stay up to date with the digital age, give the students the professional and technological skills required by employment opportunities, and develop in them the abilities needed in the labor market and entrepreneurship.

What the teachers should know to integrate differentiated learners… Educational characteristics and needs:

ICT is considered very important for those with disabilities because it allows them to fully engage in the social and economical life of their societies. Steps have been taken towards enhancing their quality of life, through enabling them and helping them gain independence.

Here are the educational characteristics and needs of these categories:

Learners	Characteristics	General educational needs
Visual impairment: blind and weak sighted	- Normal IQ level, strong sensory memory, lesser imaginative ability, difficulty in forming concepts like distance and colors. - Deficiency in using gestures, facial expressions and body language.	- Converting written text to audio, writing assignments and text in Braille, and answering orally for the blind. - Using screen reader software. - Describing pictures orally for the blind and displaying them zoomed and without details for the weak sighted.
Hearing impairment	- Problems in understanding 50% of class discussions if they didn't have the opportunity to follow it visually. - Vocabulary deficiency and problems with expressive language. - Difficulty with oral learning, in linking sounds with their corresponding written signs, and also in learning linguistic concepts. - Capacity of abstract learning and thinking is not affected if information is presented with visual language. - Weak ability to focus and difficulty remembering information unless it is presented through visual education.	- Reviewing prior knowledge when presenting ICT concepts and linking them to new concepts, real-life images and simple examples from students' environments. - Assigning tasks and using the demonstration strategy to explain the activities and present them practically. - Repeating the way to use lists and software tools more than once, and not moving on to the next step before making sure they mastered the one before it. - Adding visual elements to the visual content like arrows, circles, colored words and giving more time, in collaboration with the resource room teacher, so it becomes more flexible and able to meet the needs of hearing impaired students. - Speaking while facing the learner so that he can read lips, especially when introducing new vocabulary.
Intellectual disability	- Attention deficit, weak focus, difficulty retaining information and recalling it when needed, specifically short term memory which is related to school learning. - Tendency to depend on others and a lack of independence and enthusiasm towards achieving given tasks.	- Analyzing and dividing tasks, focus on sensory activities, and do them from easiest to hardest. - Giving clear and specific instructions, and enough time to finish tasks. - Avoiding learners failing whenever it's possible, instead they should be given tasks they succeed at first, so they would keep doing the assigned tasks and feel successful.

	- Difficulty transferring experience or knowledge from one situation to another. - Clear deficiency in the use of language, speech, pronunciation of letters and words, along with using simple words and sentences, and limited vocabulary.	- Repeating the way to use lists and software tools more then once, and not moving on to the next step before making sure they mastered the one before it. - Using the demonstration strategy to explain the activities and present them practically. - Focus on the vocabulary either by writing them on the board or highlighting them in the student book. - Preparing visual representations such as mind maps when presenting some subjects that require it, to make understanding them easier. This can include adding links to websites.
Motor disability and cerebral palsy	- Inability to achieve the task given in one go. - Difficulties with language, unclear pronunciation to the point where others are unable to understand it. The reason is a very weak control over the muscles of the tongue, lips, throat and facial expressions. - Suffering from anxiety, shyness, isolation, lack of self-confidence, and lack of social interaction.	- Including them in groups and giving them tasks according to their disabilities. - Giving less homework and class assignments, and giving them enough time to finish their tasks. - Making their responses simpler, they could be oral responses, signs or hand gestures, or answers via a computer, if possible.
Autism	- Deficit in attention, memory and enthusiasm - Difficulty in transitioning from one subject to another while being highly selective. Hints are needed to help them remember and recall. - Ability to remember visual information is better than their ability to remember audio information. Weak listening and speaking skills. - Overreacting to noise, annoyance from bright light, difficulty distinguishing between shape and background in pictures, reluctance to touch.	- Explaining the activity before starting. - Avoiding asking them to look and listen at the same time, because of their inability to process information inputted via sight and hearing at the same time. Making sure they are paying attention. - Focusing on sensory activities and using pictures while teaching: illustrated activity tables instead of language or words; the teacher speaking to them using short sentences focusing on key words which she/he pronounces loudly and places at the end of the sentence.
Attention deficit disorder	- Deficit in attention, focus and memory. - Difficulty organizing and finishing the tasks assigned to them. - Constant movement: tendency to climb, swing and walk around. - Some find it difficult to make friends, to play with their friends or to take part in their friends' calm activities. - Difficulty with adaptive behavior and life skills.	- Making sure they understood the instructions correctly. - Using activities and instructional materials that draw their attention. - Relying on instructional games and dividing tasks into less complicated sections. - Rewarding the learner for every step he does correctly. - Seating them in specific places, using appropriate reinforcements to delimit their movement in class - Presenting a daily activity plan prepared by the teacher and repeated to students.
Learning disability	- Difficulty paying attention, focusing, memorizing, forming concepts - Difficulty with literal and visual perception, short term memory. - Difficulty understanding what they hear and linking vocabulary to behavior, differentiating between similar words, following oral instructions, choosing the words that express their ideas and remembering them. - Constant movement, rapid emotional outbursts or indifference with no desire to participate in class.	- Using short sentences and the most common words, changing tone of voice and preparing students before and after reading the text, in addition to using computers to encourage them to write. - Taking into consideration spaces between words and correcting typing mistakes.

Supporting multimedia	Supporting written and audio texts	- Support your computer with a screen reader program for the blind. - Allow blind students to listen to the lesson through computer audio as a way to help in the multimedia room. - Determine key words in the lesson (like block, download files, spam messages, etc.) and write them on the board or underline them or draw a box around them in the Student's Book for those with an intellectual disability, autism and hearing impairment. - Prepare a mind map about website links (.org, .edu, .gov, .com) to simplify their explanation for integrated SEND students - Write the main ideas and concepts on the board to give integrated students enough assimilation time during the lesson. - Take the following into consideration for written and audio texts: • dividing the texts into smaller paragraphs. • focusing on main ideas. • summarizing the text while still keeping the main ideas.
	Photos and illustrations	- Describe the pictures for the blind and zoom in on them for the weak sighted. - Describe the illustrations for the blind. - Use photos to express words that don't exist in the surrounding environment if possible or give a simple example for integrated SEND students. - Make a model of a graphic organizer on a felt board and display data on it. - Support visual representation methods for technological subjects and concepts (such as PowerPoint presentations, videos, posters, etc.), with pictures and written expressions for the hearing impaired, intellectually disabled, and autistic students.
	Videos	- Play the videos about the scientists (Albert Lin and Anika Ullah) in each unit accordingly, by sectioning each of them and playing one section at a time, commenting on it and deducing its main idea, then move on to the rest of the sections and do the same. - Describe the content of the videos to the blind, taking the following into consideration: • giving your comments after each video in a simple way. • making sure integrated SEND students get the idea. • summarizing the videos when finished and reviewing their ideas. • facing hearing impaired students while commenting on the videos.

Supporting groups	- Divide blind students into big and small groups and let them know that, then ask them oral questions. - Place one integrated SEND student per group for Share activities. - Support students with motor disability and cerebral palsy by asking their classmates to help them write. - Raise the awareness of the class about the needs of their integrated SEND classmates to avoid negative reactions that will obstruct the learning procedure during the application of the activity (Test a partner).
Supporting digital safety	- Determine ways of preserving safety measures while using the internet and write them on the board in concise, organized and short sentences, or put them into a mind map for integrated SEND students. - Make a table that includes the positive and negative impacts of ICT tools using short, simple and specific sentences. - Present the lesson by letting integrated SEND students act it like a play to better clarify the idea of bullying. - Summarize the ethics of using ICT tools by identifying main sentences and ideas. - Take into consideration the possibility of integrated SEND students being bullied and encourage them to face that without fear or hesitation and to discuss what happened with others.

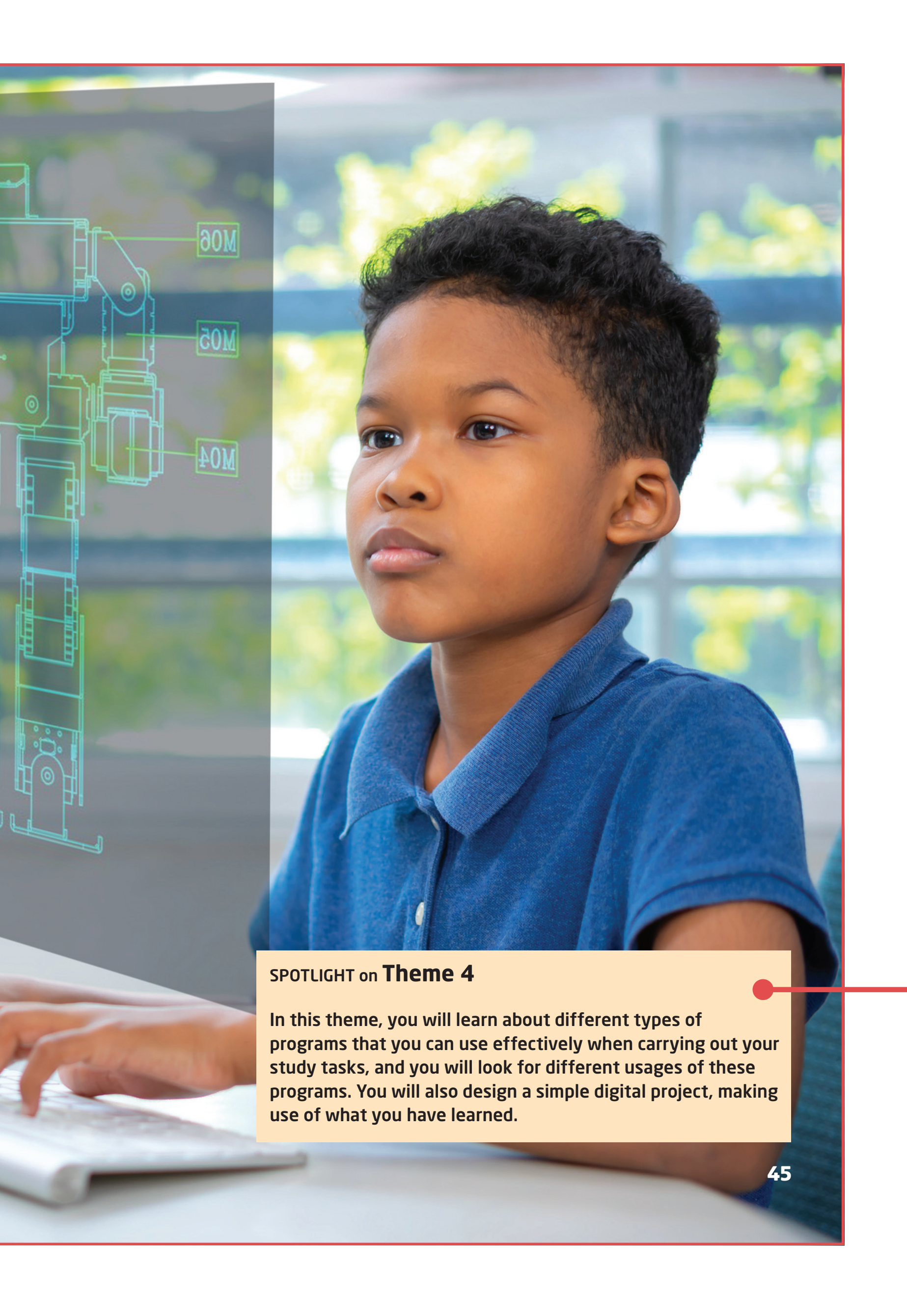
Theme Opener

Following the curriculum, the content of the course is divided to match the four themes of the course across the year.

The theme opens with a striking photograph of the National Geographic Explorer in action. The powerful image engages the learner with the Explorer and the theme topic.



A short caption explains what students can see in the photograph. Further information is provided in the Teacher's Guide where applicable to aid class discussion.



SPOTLIGHT on **Theme 4**

In this theme, you will learn about different types of programs that you can use effectively when carrying out your study tasks, and you will look for different usages of these programs. You will also design a simple digital project, making use of what you have learned.

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Every theme focuses on a National Geographic Explorer, and examines how they use ICT in their lives. Each Explorer is chosen to link to the theme of the theme and to provide a practical example of ICT in action.

Lesson Walkthrough

The format of each lesson follows an Engage, Learn, Explore, Review and Self-assess format. It opens with relevant lesson objectives.

The first lesson of every theme is an Explorer in Action lesson. This allows students to learn more about a National Geographic Explorer and their work.

A clear lesson heading is provided along with a lesson title.

This box ties in the objectives of the lesson whilst also asking students to come back at the end of the lesson for self-assessment. The teacher can easily follow up on any students who might be having difficulties whilst also giving extra challenges to advanced learners.

An Engage question opens each lesson. Using the photograph as a stimulus, the teacher can lead a focused and interesting class discussion.

The Teacher's Guide also provides suggested aims for each Engage question, which links to the curriculum.

LESSON I EXPLORER IN ACTION

Objectives

By the end of the lesson, I will be able to:

- Describe different kinds of software and how they are used.
- Discuss the role of different digital applications.
- Identify ways in which ICT tools are helping wildlife.

After the lesson, check the correct box: **I can . . .**

Describe different kinds of software and how they are used.	Very well	OK	Need more work
Discuss the role of different digital applications.	Very well	OK	Need more work
Identify ways in which ICT tools are helping wildlife.	Very well	OK	Need more work

Engage

What do scientists want to find out when they look for animals in the wild?

Learn

Gautam Shah is the founder of *Internet of Elephants*. The organization uses ground-breaking digital tools to connect people with wildlife around the world.

After living and working as an IT specialist in many countries including the United States, India, Argentina, and Kenya, Mr Shah realized he wanted to use his skills to make a positive impact on wildlife.



The Learn stage of the lesson is often a text which students read. The length of the text is suitable for the students' age and potential for conceptual understanding. The Explorer's story offers an example of the theme. In this theme about ICT in our lives, the archaeologist Albert Lin is introduced along with the various different tools he makes use of in his work.

Concepts that may be unfamiliar are introduced with simple explanations and images to aid understanding.

In 2014, Mr Shah quit his job in IT and began to look into ways that technology could be used for wildlife conservation. Wildlife conservation is protecting animals in their natural habitats.

Mr Shah believes in using technology and online games to bring wildlife into people's daily lives. For that reason, he set up *Internet of Elephants*. The team at *Internet of Elephants* works with animal conservation organizations from all over the world and uses the data they collect by GPS to help create interactive online games.

Internet of Elephants, creates unique mobile games, using augmented reality, and data visualization that allow people to interact with amazing creatures. Augmented reality lets you virtually see the real environment of the things you would like to see, and presents you with information about them through screens and digital tools made specifically for this purpose. The games tell the stories of individual animals, and players can follow their daily lives.

Mr Shah hopes *Internet of Elephants* is the start of a new approach to engaging the public with wildlife. The mobile games mean that wherever you are in the world, you can interact with amazing animals in countries close to your country or far away!

Each Explorer in Action lesson includes a video which introduces the Explorer and their work.

Video

Watch the video about Gautam Shah's projects. What technology does the team use?

The Explore section of the lesson is a follow-up task which enables active learning and encourages critical and higher-order thinking.

Explore

Being good at using ICT tools and knowing how to use technology creatively and productively can lead to many interesting careers. Research different careers by discussing with your teachers, family, and other students.

Think about careers that benefit the community and society. What kind of jobs interest you the most? Explain why.

Review

1. What animals would you like to see in their natural habitats? What would you like to know about them?
2. What kind of technology could you use to help discover the information you need?

The Review section of the lesson enables students to check their understanding of the main principles of the lesson. This can include critical thinking or further engagement with the life skills or values in the lesson.

Self-assess

Go to the Objectives at the beginning of the lesson.
Check the correct I can . . . box.

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This section of the lesson allows for active self-assessment. Teachers ask students to go back to the objectives at the beginning of the lesson and check what they can and can't do.

Lesson Walkthrough

A 'Learn by doing' spread follows the main content for each lesson. The aim of these pages is to further expand upon and check students' understanding of the material.

The heading shows a clear, identifiable link with the preceding part of the lesson.

Life skills is one of the main three pillars of the curriculum. The question here further develops the topic from the Learn section of the lesson.

Students are regularly asked to present their work according to their own vision, in charts and graphic organizers. This encourages them to work methodically and to think about the best way to present information.

LESSON I EXPLORER IN ACTION

Life skills

1 Read and answer

What apps do you use regularly?

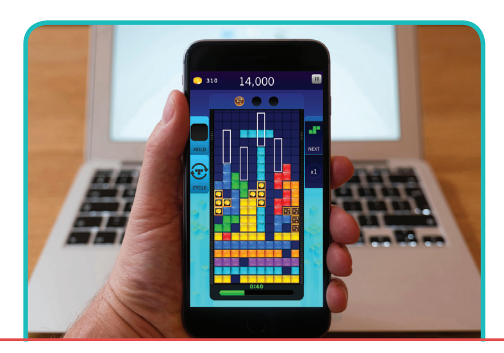
Graphic Organizer

2 Read and match the terms to the photos.

Mobile gaming	Data display software	Augmented reality







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The 'Learn by doing' spreads feature a variety of headings, including *Comprehension*, *Critical thinking*, *Graphic organizer*, *ICT and me*, *Research*, *Life skills*, *Values*, and *Issues and challenges*.

Critical Thinking

3 Think and answer

Read the scenarios below. Which digital tools from Exercise 2 would be used for each scenario?

1 You're on a long, boring journey and don't want to read a book.

2 In class, you are learning about the solar system and your teacher wants you to have a full, immersive experience.

3 You're trying to explain some complicated statistics from a text but think your friend would understand it better in a chart.

4 Discuss these questions in pairs

1 Mr Shah uses his skills in IT and his interest in nature conservation to create apps that are fun and educational. What other interests could be combined with IT skills to create educational apps?

2 What inventions do you think will come next?

5 Think and answer

Imagine you are going to create an app that uses GPS, augmented reality, and mobile gaming. Complete this description about your app and how it will work.

My app will be called ...

The app is designed to ...

Three words to describe my app are ...

The app can be used ...

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A *Critical thinking* section encourages students to think more deeply about the topic and how it relates to our lives. It includes both factual and imaginative tasks which encourage creativity.

How to Teach the Stages of a Lesson

Each lesson includes the same sections, so a consistent approach can be applied. Each section can be taught by following one of several **routines**—consistent sequences that follow the same steps each time. This way, teachers cover the material, and students will know what to expect. However, there is room for a teacher's creativity as well, and there are supporting suggestions in the Teacher's Guide.

Theme Opener pages: Use the photograph on the opening spread to elicit ideas and background knowledge about the theme from students. Ask the Essential Question on this page to direct their attention to the material they will be studying.

Lesson Objectives: To make sure students know what they will be covering in the lesson, point out the specific goals of each lesson. Have students first reflect on what they already know; this will help them see their progress by the end of the lesson. This section is revisited at the end of the lesson for the Review. Use the routines **Time to Explore**!, **What Do I Need To Do?**, or **Understanding Objectives** to guide students through this section.

Engage: To introduce students to the lesson topic and raise their interest, use the questions in this section to help students activate their background schema. This helps prepare them for the reading to follow. Use the routines **Think-Pair-Share**, or **Photo Detectives!** to guide students through this section.

Learn: Use the reading in this section to present new information about the lesson topic. Students will not only learn content but also improve their reading and critical thinking skills. Use the routines **Preview**, **K-W-L Chart**, **Taking Notes**, **Mind-Mapping**, **Popcorn Reading**, or **Buddy Reading** to guide students through this section.

Explorer in Action: These sections feature real people. It is easier for students to understand what professionals do in their careers if they have specific contemporary examples. Students both read and watch videos to learn about their lives and contributions. You can bring in additional information about these people, or you may choose to talk about other well-known Egyptians in the same field as further examples.

Videos: The videos in the Explorer in Action sections provide students with a variety of input. Students often find video motivating and captivating. However, the videos are optional, so if your classroom context does not allow for this type of media, you can still cover all of the necessary material. In this case, you might wish to bring in additional images from books or the internet so that students do not feel they are missing anything. For videos, use the routine **Preview**, **View**, **Review**.

Explore: In this section, ask follow-up questions to help students apply the information they just learned to their own lives and contexts. This is a good opportunity to showcase the diversity in students' lives and opinions. Use the routines **Time for a Discussion!**, **Brainstorm**, or **The 2 to 4 Discussion** to guide students through this section.

Review: To wrap up the lesson and check comprehension, use this section to enable students to consolidate the lesson information and identify key ideas. If students have trouble with any of the tasks or questions in this section, clear up any misunderstandings or questions before moving on to the next lesson. Use the routines **Test a partner** or **Family Test** to guide students through this section.

Self-assess: Use this section for students to evaluate their own understanding and progress. Direct their attention back to the lesson objectives, and have them complete the checkbox. If any students still feel they need more work, either spend more time as a class on this section or help the students individually. Use the routines **3-2-I**, or **Promise!** to guide students through this section.

Learn by Doing: Give students the opportunity to engage with the lesson content through practical application. This is the perfect time to encourage creativity and to let students include art in their academic work.

Theme Reviews: These sections give students the chance to see their own progress in the course. Ask students to reflect over the entire theme and recall the most essential information. This is an excellent place for pair and group work, so students can help each other. Give them time to ask you any necessary questions.

Projects: In the projects, students work collaboratively in groups to apply the lesson topic to their own lives in a creative, meaningful way. This is a perfect time to encourage self-expression. Read through these sections in advance at the beginning of the week to plan how you will time the projects and to see if any students would have challenges outside of the classroom. Knowing these issues in advance will make them easier to solve. Don't be afraid to adapt the assignments to meet individual students' circumstances if necessary.

How to Teach the Course

Each lesson in the Teacher's Guide starts with a list of the Objectives for the lesson, Life skills, Values, and Issues and Challenges that are included within the tasks and topics.

There is also a handy list of materials that are needed to teach the lesson.

Every section of the Teacher's Guide has comprehensive notes under the same headings as in the Student's Book.

For every task, a timeframe is suggested so you can pace the lesson correctly.

LESSON 2 pp. 14–15

Digital citizenship

OBJECTIVES

- Explain what it means to be a digital citizen.
- Explain key concepts of digital citizenship.
- Discuss how to use ICT tools ethically, responsibly, and safely.

LIFE SKILLS

- Learning to be: sharing
- Learning to live together: communication

VALUES

- Co-existence values: tolerance and acceptance of others

ISSUES AND CHALLENGES

- Globalization issues: digital citizenship
- Citizenship issues: awareness of rights and responsibilities

MATERIALS NEEDED

- Pieces of papers and pencils (Review)
- Poster paper or whiteboard; markers (Comprehension)

LESSON 2 Digital citizenship

Objectives

By the end of the lesson, I will be able to:	After the lesson, check the correct box: **I can . . .**		
• Explain what it means to be a digital citizen.	Very well	OK	Need more work
• Explain key concepts of digital citizenship.	Very well	OK	Need more work
• Discuss how to use ICT tools ethically, responsibly, and safely.	Very well	OK	Need more work

Engage

What do you think it means to be a digital citizen?

Learn

Digital citizenship is the ability to use digital technology ethically, responsibly, and safely. This helps you to enjoy and take advantage of digital technology, and protects your **digital footprint**.

In Term 1, you learned some techniques that are part of digital citizenship. You learned how to:

- be **ethical and responsible** by treating others online with respect, and by crediting sources you find online.
- stay **safe** online by setting strong passwords and choosing websites you visit wisely, using updated software, and monitoring online screen time.

Digital footprint: Your digital footprint is a record of what you do online, including the sites you visit and the things you post; it can also include things that others post about you. This is why it's important to share information about yourself and others safely and responsibly.



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OBJECTIVES

AIM: To ensure that students understand the objectives of the lesson.

TIME: 2–3 minutes

- Follow the steps for **Routine 3: Understanding Objectives**.
  1. Draw students' attention to the objectives of the lesson. Say To meet the objectives of a lesson, it's a good idea to make sure that you understand what the objectives are actually saying.
  2. Read the objectives aloud to the class.
  3. Ask Are there any words or phrases in the objectives that you don't understand? What are they?
  4. Explain any unfamiliar terms or vocabulary. Some students, for example, may be unfamiliar with the word *ethically*. Explain: When you act ethically, it means you are doing what is right and fair—not just for yourself, but for everybody else, too.
  5. Remind students they will check the I can… boxes after completing the lesson.

44 LESSON 2

The aim of each activity is explained, making it easy to see at a glance how the task builds students' knowledge and skills.

Suggested language for you, the teacher, is set in blue so that it is easy to find and follow.

ENGAGE

AIM: To engage students in a discussion that relates to the issue of digital citizenship; to use critical thinking to investigate clues in photos.

TIME: 2–5 minutes

- Follow the steps for **Routine 5: Photo Detectives!**
  1. Draw students attention to **Engage**. Tell students to cover the photos with a book.
  2. Read the Engage questions aloud.
  3. Elicit some quick answers from the class.
  4. Say You're going to be photo detectives! Uncover the photos and look for clues!
  5. Say Sit knee-to-knee. Investigate the photos. Tell each other what you find.
  6. Read the **Engage** question again. Elicit answers from individual students. (Suggested answers: **The boy is thinking about the different elements of good digital citizenship, such as "etiquette," or obeying the rules of politeness; communicating respectfully online; honesty in "commerce," or buying and selling things that you have the money to buy or the right to sell; maintaining your own "security" by setting strong passwords and not invading the security or privacy of others; etc. The girl is also being a good digital citizen because she is using her computer to connect with other people. She and her friends are creating a kind of online community, respectfully looking at one another and taking turns as they talk.**)

LEARN

AIM: To enable students to read text in a way that maintains interest.

TIME: 10–15 minutes

- Follow the steps for **Routine 10: Popcorn Reading.**
  1. Say We're going to try Popcorn Reading now. I'll ask a student to read aloud. When I say "Popcorn," that student should stop, look around, quickly choose the next person to read and say their name.
  2. Remind the class Remember that you must choose a NEW person; don't choose the person who just read! And stay on your toes, because you could be called at any time!
  3. Assign the first person to read aloud. The other students read along silently.
  4. Call "Popcorn" when the reader reaches a logical point in the text (e.g., the end of a paragraph, bullet point, or chunk of text in the chart). That reader shouts the name of the next person to read.
  5. Note: Remind students to read the definitions for digital footprint and piracy.

OPTIONAL: Instead of calling out their name, the reader could tap another student on the shoulder.

  6. The activity continues in this way, in the form of a Round Robin, until you reach the end.

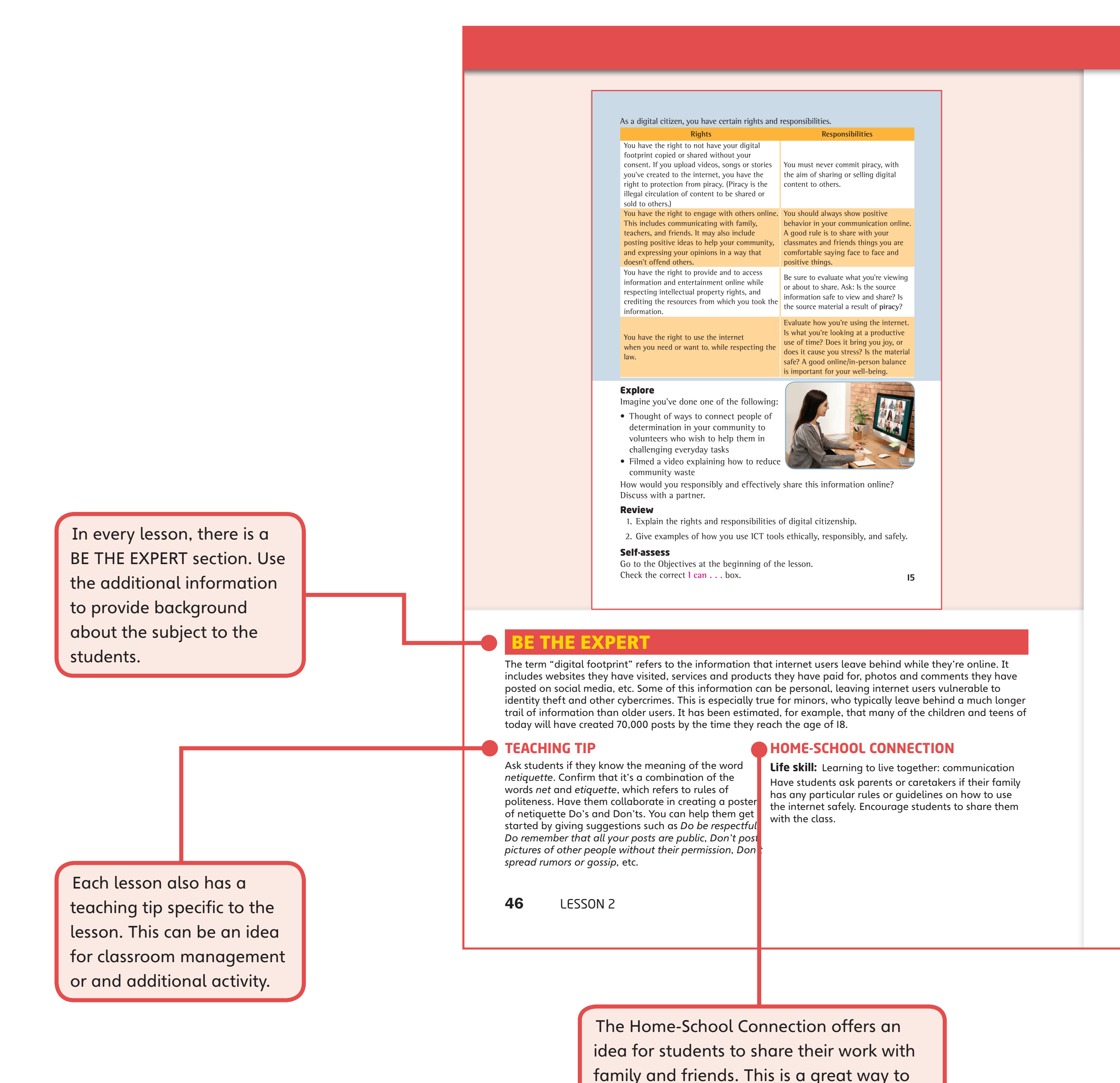
There are plenty of optional extra tasks suggested in the notes for the teacher. These can be used to offer further practice for students who need support, or to provide extra material for fast finishers.

Teaching support for an integrated classroom					
Intellectual disability and slow learning	**Autism**	**Hearing impairment**	**Learning disability**	**Motor disability and cerebral palsy**	**Blind and weak sighted**
- Writing the vocabularies (digital citizenship, digital footprint) on the board or highlighting them in the Student's Book. - Highlighting the names of the platforms WhatsApp, Facebook, and Skype in the Student's Book.				- Supporting students suffering from motor disability and cerebral palsy by asking their classmates to help them write. - Making their responses simpler, they could be oral responses, signs or hand gestures, or answers via a computer, if possible. - Including them in groups and giving them tasks according to their disabilities.	- Describing pictures for the blind and displaying them zoomed for the weak sighted. - Using the screen reader for the (WhatsApp, Facebook, and Skype) platforms.

LESSON 2 45

Answers are set in orange text so that they can be referred to easily.

How to Teach the Course



As a digital citizen, you have certain rights and responsibilities.

Rights	Responsibilities
You have the right to not have your digital footprint copied or shared without your consent. If you upload videos, songs or stories you've created to the internet, you have the right to protection from piracy. (Piracy is the illegal circulation of content to be shared or sold to others.)	You must never commit piracy, with the aim of sharing or selling digital content to others.
You have the right to engage with others online. This includes communicating with family, teachers, and friends. It may also include posting positive ideas to help your community, and expressing your opinions in a way that doesn't offend others.	You should always show positive behavior in your communication online. A good rule is to share with your classmates and friends things you are comfortable saying face to face and positive things.
You have the right to provide and to access information and entertainment online while respecting intellectual property rights, and crediting the resources from which you took the information.	Be sure to evaluate what you're viewing or about to share. Ask: Is the source information safe to view and share? Is the source material a result of **piracy**?
You have the right to use the internet when you need or want to, while respecting the law.	Evaluate how you're using the internet. Is what you're looking at a productive use of time? Does it bring you joy, or does it cause you stress? Is the material safe? A good online/in-person balance is important for your well-being.

Explore

Imagine you've done one of the following:

- Thought of ways to connect people of determination in your community to volunteers who wish to help them in challenging everyday tasks
- Filmed a video explaining how to reduce community waste

How would you responsibly and effectively share this information online? Discuss with a partner.

Review

1. Explain the rights and responsibilities of digital citizenship.
2. Give examples of how you use ICT tools ethically, responsibly, and safely.

Self-assess

Go to the Objectives at the beginning of the lesson.
Check the correct I can . . . box.

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In every lesson, there is a BE THE EXPERT section. Use the additional information to provide background about the subject to the students.

BE THE EXPERT

The term "digital footprint" refers to the information that internet users leave behind while they're online. It includes websites they have visited, services and products they have paid for, photos and comments they have posted on social media, etc. Some of this information can be personal, leaving internet users vulnerable to identity theft and other cybercrimes. This is especially true for minors, who typically leave behind a much longer trail of information than older users. It has been estimated, for example, that many of the children and teens of today will have created 70,000 posts by the time they reach the age of 18.

TEACHING TIP

Ask students if they know the meaning of the word *netiquette*. Confirm that it's a combination of the words *net* and *etiquette*, which refers to rules of politeness. Have them collaborate in creating a poster of netiquette Do's and Don'ts. You can help them get started by giving suggestions such as *Do be respectful, Do remember that all your posts are public, Don't post pictures of other people without their permission, Don't spread rumors or gossip*, etc.

HOME-SCHOOL CONNECTION

Life skill: Learning to live together: communication

Have students ask parents or caretakers if their family has any particular rules or guidelines on how to use the internet safely. Encourage students to share them with the class.

46 LESSON 2

Each lesson also has a teaching tip specific to the lesson. This can be an idea for classroom management or and additional activity.

The Home-School Connection offers an idea for students to share their work with family and friends. This is a great way to show parents and carers what students are studying in class and to involve them in their child's learning.

The Routine which the notes suggest for each activity is clearly named, so that they can be found and consulted on the Routines list. If it is the first time that a Routine is suggested, it is fully explained.

EXPLORE

AIM: To enable students to work quickly, creatively, and collaboratively to generate ideas; to lead an activity based on their ideas to meet the objectives.

TIME: 10 minutes

- Follow the steps for **Routine 13: Brainstorm.**
  1. Introduce the **Explore** topic. Read the instructions aloud.
  2. Say Now we're going to think of lots of ideas, quickly, without stopping!
  3. Have students sit in groups of three.
  4. Say One person in the group needs a piece of paper and a pen (or pencil). He or she will write your group's ideas down on the paper.
  5. Say You have two minutes to write down all the ideas you can think of! Don't stop!
  6. Say Go! The activity begins. After one or two minutes, call Stop!
  7. Give students time to read the ideas on their pieces of paper.
  8. Ask What ideas did you think of? Tell the class the idea that you like best. (Suggested answers:
     (**To find volunteers willing to work with people of determination, you can post notices on social media accounts associated with your neighborhood or community. You should not post the person of determination's name, however, because that would be violating his or her privacy. Similarly, you could post a video explaining how to reduce waste on a social media account or virtual bulletin board, but you should be careful not to show identifying information of individual people, like their car or home address.**)

REVIEW

AIM: To check and consolidate the knowledge that students should have learned today.

TIME: to be completed at home

- Follow the steps for **Routine 16: Family Test.**
  1. Draw students' attention to Review.
  2. Say You are going to ask a family member to test you on your knowledge.
  3. Say 'First, copy the two questions on a piece of paper. Later on today, ask someone in your family to read the questions aloud. Tell them everything you know!
  4. Have students copy the prompts to take home so that family members can test them.
  5. When students return to class, follow-up by asking them: Based on what you've learned so far, has your answer to the **Engage** question changed? How?

SELF-ASSESS

AIM: To help students complete a truthful self-assessment and find the assistance they need to further develop.

TIME: to be completed at home

- Follow the steps for **Routine 18: Promise!**
  1. Draw students' attention to Self-Assessment. Read the first instruction aloud and point to the I can… boxes.
  2. Say Think about how well you can do each Objective. You have three choices: I can do it very well, I can do it OK, and I need more work. Check the correct box at home.
  3. Remind students to be honest!
  4. Say After you've completed the self-assessment, write a promise. Complete the sentence: *In the next lesson, I'm going to try to . . .*

OPTIONAL: Elicit some ideas from students and write them on the board, e.g., *I'm going to . . . take notes during class, ask the teacher when I don't understand, participate in discussions, listen when others speak,* etc.

  5. Praise students for their efforts.

Statements and answers that you might expect from students are highlighted in the notes in purple.

How to Teach the Course

The Learn by doing pages are also explained in full, with notes on every activity.

Answers for tasks which involve completing tables, graphs and graphic organizers are clearly laid out.

LESSON 2 pp. 16–17

Learn by doing

COMPREHENSION

AIM: To reflect on the rights and responsibilities that come with digital citizenship.

TIME: 5–7 minutes

1 Look and write. Then answer the question

1. Read aloud the directions. Then read aloud the first item in the chart: You have the right to engage with others online.
2. Ask students to think of an example of how this right can be used responsibly. If necessary, make a suggestion, such as: Be positive. If you can't think of anything positive to say, you don't have to say anything at all!
3. On the board, recreate the chart shown in the Student Book. Write down the example generated during your discussion, and have students copy it in their books.
4. Form pairs of students. Have partners work together in filling out the examples for Items 2 and 3.
5. Invite students to share their answers with the class. Use their responses to complete the chart on the board. (Suggested answers: 2. If you post something from another source, let your readers know where it came from. 3. Don't spend long stretches of time online without any breaks. You should get up and walk away from your device every 25-30 minutes.)

AIM: To discuss and give examples that illustrate the principles of positive digital citizenship.

TIME: 7–10 minutes

2 Think and write

1. Read the directions aloud and then form groups of three students.
2. Have groups work together in providing examples of how they can be good digital citizens, leave positive digital footprints, share information from the Internet, and avoid piracy. Have students write down their ideas in the appropriate spaces as they go through the items.
3. Reconvene the class. Use students' written responses as the basis for discussion. Ask for example: How can we be good digital citizens? Field responses from the class, and provide feedback as necessary. (Suggested answers: 1. You can be a good digital citizen by respecting the privacy and feelings of other users. 2. To leave a positive digital footprint, we should only post information that is accurate. 3. Share information that would helpful, enlightening, or fun; never share gossip or something that would hurt someone you know. 4. We can and should avoid piracy by not posting photos and videos that are meant for sale.)

Learn by doing **LESSON 2** Digital citizenship

Comprehension

1 Look and write. Then answer the question

Complete the chart. Read the rights of digital citizenship. Provide an example of how you can use each right responsibly.

Rights	Example
1. You have the right to engage with others online.	
2. You have the right to gather and post information and entertainment online.	
3. You have the right to use the internet when you want to.	

Create a new right that can be connected to digital citizenship. How can you use this right responsibly?

2 Think and write

Provide an example of how you can achieve each of the following:

1. being a good digital citizen
2. leaving a positive digital footprint
3. sharing with your colleagues and friends information published on the internet
4. avoiding piracy

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Critical Thinking

3 Think and answer

Think about what you have learned about digital citizenship. Read the scenarios below. Explain how you would handle each one.

1. You read a blog that talks about the best food to eat for breakfast. However, you disagree with the blogger's opinion. You want to write a response to share your thoughts on what you think is a healthier and tastier breakfast option. How do you express your opinion in a positive way?

2. You've noticed lately that your friend is constantly online. He/She seems cranky and tired. Who do you talk to about this? What do you say?

ICT and me

4 Think and answer

Can you think of a time in your daily use of ICT tools when you or someone you know was a good digital citizen? Discuss this situation with your teacher and classmates.



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CRITICAL THINKING

AIM: To brainstorm and write about positive ways of responding to others—both online as well as in person.

TIME: 7–10 minutes

3 Think and answer

1. Read aloud the directions, then read the first item. Invite students to share their ideas on how to respond to the blogger in a positive way. (Suggested answer: **1. You can start off by saying it's a great idea and then adding an idea of your own.**)
2. When you are finished discussing the first item, have students write their responses in their books.
3. Repeat the procedure for the second item: read aloud the questions, brainstorm responses, then have students write their ideas in their books. (Suggested answer: **2. Don't make judgments. Ask questions so that your friend feels free to share.**)

ICT AND ME



AIM: To think and write about an instance of good digital citizenship.

TIME: 3–5 minutes

4 Think and answer

1. Read aloud the directions and the questions.
2. Give students a few moments to write down an example of a time when they or somebody they know was a good digital citizen. Remind them that this an opportunity for them to write about their own experiences. There are no right or wrong answers.
3. When students are finished, invite two or three volunteers to share what they wrote about.

EXTENSION ACTIVITIES

1. Invite students to talk about online situations in which they weren't sure what to do. Ask the class to help you brainstorm possible responses. Provide feedback as necessary, emphasizing the principles of safety, respect, and accountability.
2. For students who are unwilling to share in class (perhaps due to privacy issues), create a box or envelope where students can submit a written question. Tell them that you will respond to their questions privately, during a break or after class.

LESSON 2 49

ICT AND ME activities offer students a chance to personalize the topic and apply their knowledge to their own situation.

Suggested Extension activities encourage students to do further research on the topic. There are suggestions included that do not require access to technology as well as a technological option. Teachers can assign the tasks that are best suited to their students.

Teaching Routines

Teaching Routines

The Students need to know what they should understand, what should be done and what's expected from them by the end of each lesson. Having the same sections in every lesson is one way to achieve this; using teaching routines is another way.

A **routine** simply means a set of organized steps that is repeated in similar circumstances. As you use a routine again and again, it becomes easier and easier to use because the pattern is familiar. You will never be left with a page in the Student Book that you don't know how to teach. You will always have the necessary language to explain the lesson. However, if you wish to adapt the routine to your own classroom or context, you certainly can, as long as you meet the stated lesson objectives.

You will start Theme 1 with just one or two routines for each section, and as the term progresses, one or two more routines will be added for the main lesson sections. In this way you can have both consistency and variety to keep your teaching both structured and fresh.

Here are the teaching routines. Examples of language that you would say are in blue; examples of what you would write on the board are in purple; examples of what students might say are in green. Remember that these are examples only, and in specific lessons, the language is adjusted to reflect the Student Book.

OBJECTIVES ROUTINE 1
Time to Explore!

AIM: Engage students' interest in the lesson objectives and content.

TIME: 2–3 minutes

1. Draw students' attention to the Lesson topic. **Say** *This lesson we're going to learn about <the lesson topic>.* (See the Lesson Plan.)
2. Read the objectives aloud to the class.
3. Write on the board *Now's our chance to explore ... .* To ensure that students think in detail about the objectives, write more actions directly below *explore*, e.g: *think about, learn about, study, discuss, look at, investigate, consider, plan*.
4. Give students a minute to look at the lesson and assess what they'll explore.
5. Elicit answers from individual students, e.g.: Now's our chance to ... read a map!

OBJECTIVES ROUTINE 2
What Do I Need to Do?

AIM: Encourage students to take responsibility for their own learning needs and paths.

TIME: 2–3 minutes

1. Draw students' attention to the Lesson topic. **Say** *This lesson we're going to learn about <the lesson topic>.*
2. Read the objectives aloud to the class. **Optional: Ask** *Which objectives can you already do?* Elicit some ideas.
3. **Ask** *What kind of things will we need to pay attention to during the theme?*
4. Elicit ideas from the students, e.g., **I need to pay attention to dates and times!**
5. Write students' ideas on the board and remind students to pay attention to them during the lesson.

OBJECTIVES ROUTINE 3
Understanding Objectives

AIM: Ensure that students understand the objectives of the lesson.

TIME: 2-3 minutes

1. Draw students' attention to the Objectives. **Say** *To meet the objectives of a lesson, it's a good idea to make sure that you understand what the objectives are actually saying.*
2. Read the objectives aloud to the class.
3. **Ask** *Are there are any words or phrases in the objectives that you don't understand? What are they?*
4. Explain any unfamiliar terms or vocabulary. Some students, for example, may be unfamiliar with the Egyptian Knowledge Bank. Explain: *The Egyptian Knowledge Bank is an online resource for teachers, students, and the public in general. It has links to books, articles, and all kinds of information. We'll be learning more about it in this lesson.*
5. Remind students that they will check the I can boxes after completing the lesson.

ENGAGE ROUTINE 4
4. Think-Pair-Share

AIM: Enable students to participate confidently and collaboratively in a class discussion that leads to the objectives of the lesson.

TIME: 2–5 minutes

1. Draw students' attention to **Engage**.
2. **Say** *I'm going to ask you a question. Don't say anything! Just think about it quietly.*
3. Read aloud the question. Let students think silently about some possible answers. They may make simple notes if they wish.
4. After a minute, **say** *Now sit shoulder to shoulder with a classmate and share ideas. You can make notes, but keep them very short.*
5. Check that the students are comparing their ideas with a classmate.
6. **Say** *I'm going to ask the question again. This time, put up your hand to answer.*
7. Read the question aloud again. Call on students with their hands up and have them share their ideas with the class. They can refer to their notes but shouldn't read whole sentences aloud. **Optional:** To encourage more discussion, **ask** follow-up questions *<Name>, what do you think? <Name>, why do you think that? Can you give an example?* etc.

ENGAGE ROUTINE 5
Photo Detectives!

AIM: Engage students in a discussion that leads to a lesson objective or life skill; use critical thinking to investigate clues in photos.

TIME: 2-5 minutes

1. Draw students' attention to **Engage**. Tell students to cover the photo with a book.
2. Read the Engage questions aloud.
3. Elicit some quick answers from the class.
4. **Say** *You're going to be photo detectives! Uncover the photos and look for clues!*
5. **Say** *Sit knee to knee. Investigate the photos. Tell each other what you find.*
6. Read the Engage questions aloud again. Elicit answers from individual students.
7. See the Lesson Plan for answers and follow-up questions.

LEARN ROUTINE 6
Preview

AIM: Activate students' background schema and encourage them to anticipate the content so they can build context before reading.

TIME: 2-5 minutes

1. **Say** *Previewing an article before you read can help you build context. You will have an idea what the article is about before you even start reading. It's a good habit to get into because it will help you understand and remember what you read.*
2. Read aloud the first sentence. Tell students that the first sentence of a reading passage is called a "topic statement." It gives the main idea of the article and the ideas or information that will be covered.
3. Direct students' attention to the subheads. Ask *Subheads also give clues about the ideas and information that will be covered. Based on the subheads you see here, what do you think the article is about?* Listen to student responses and provide feedback that helps them focus on the ideas suggested by the subheads.
4. Tell students to keep their guesses in mind as they read the article. When they finish, ask if their guesses were correct.

OPTIONAL: Write guesses (both correct and incorrect) on the board. Refer to them during the lesson, i.e., *Amal guessed we would learn about growing plants. She was right!*

LEARN ROUTINE 7
K-W-L Chart

AIM: Motivate students to read a long text; enable students to achieve the lesson Objectives.

TIME: 15–20 minutes

BEFORE READING

1. Draw a chart with three columns on the board. Label the columns: K, W, L.
2. **Say** *Copy the chart into your notebook or on a piece of paper.*
3. **Say** *K means: What do you Know about this topic? W means: What do you Want to know about the topic? L means: What have you Learned about the topic? Before we read, we're going to complete columns K and W. After we read, we're going to complete column L.*
4. Have students sit shoulder to shoulder.
5. **Ask** *What do you Know about the topic? Share ideas and note them in column K.*
6. **Ask** *What do you Want to know about the topic? Share ideas and write them in the column W.*

AFTER READING

7. After students have read the text, **ask** *What did you Learn about the topic? Share ideas and write them in column L.*

OPTIONAL: Have the students review column W. **Ask** *What else do you Want to know? If the answer wasn't in the text, where can you find the information?*

8. Point to the relevant lesson Objective(s). **Say** *Now you can … Well done!*

LEARN ROUTINE 8
Taking Notes

AIM: Take notes while reading to self-monitor comprehension.

TIME: 10-12 minutes

1. **Say** *Taking notes while you read is a good way to make sure you are following the text. Look out for big ideas and words you don't understand. Use a pencil to draw a line under the most important words. Or you can circle them. Another way is to use a highlighter. If you don't understand something, look it up in a dictionary. You can also ask me if you need help. Then write the word's meaning in the margin.*
2. Have students read the text and take notes as directed.
3. When they are finished, remind students that taking notes while reading is a good skill to develop, but before doing so they should make sure it is OK to write in the material provided to them.

LEARN ROUTINE 9
Mind-Mapping

AIM: Help students achieve the lesson Objectives by organizing the new information they have learned.

TIME: 15–20 minutes

1. Draw students' attention to **Learn**. Read the heading and the lesson Objectives.
2. Draw a big box in the center of the board and label it.
3. Have students read the information in **Learn**. Pause at useful points in the text and add to the information in the Mind Map on the board. The aim is to visually organize what students learn about the topic.

OPTIONAL: After they finish reading, ask some more questions.
OPTIONAL: **Say** Now copy the mind map in your notebook or on a piece of paper.

LEARN ROUTINE 10
Popcorn Reading

AIM: Enable students to read text in a way that maintains interest.

TIME: 15-20 minutes

1. **Say** *We're going to try Popcorn Reading now. I'll ask a student to read aloud. When I say "Popcorn," that student should stop, look around, quickly choose the next person to read and say their name.*
2. **Remind the class** *Remember that you must choose a NEW person; don't choose the person who just read! And stay on your toes, because you could be called any time!*
3. Assign the first person to read aloud. The other students read along silently.
4. Call "Popcorn" when the reader reaches a logical point in the text (e.g., the end of a paragraph or idea). That reader shouts the name of the next person to read.
5. Note: Remind students to read the definitions for tag and credit.

OPTIONAL: Instead of calling out their name, the reader could tap another student on the shoulder.

6. The activity continues this way, in the form of a Round Robin, until you reach the end.

LEARN ROUTINE 11
Buddy Reading

AIM: Enable students to read text in a way that maintains interest; to help students improve their own reading ability.

TIME: 15-20 minutes

1. Form pairs. Students sit with a classmate, preferably with a similar reading ability, shoulder to shoulder.
2. **Say** *You're reading Buddies. That means you're reading friends, so your job is to help each other. You're going to take turns reading the text to each other. If you're reading, remember you can ask for support from your Reading Buddy, or even ask them to take over for a while. I'll be moving around the classroom if you need me.*
3. Point to the first paragraph of the text. Tell students to take turns reading each paragraph aloud to their partner.
4. While Reading Buddies work together, circulate through the room and provide help with pronunciation and comprehension as necessary.
5. To speed up the lesson, shout *My Turn!* and read a section aloud. Then hand over the next section to the buddies. Continue alternating like this, so that they receive practice listening to you, as well as to each other.

EXPLORE ROUTINE 12
Time for a Discussion!

AIM: Explore ideas and information that were introduced through the reading passage in Learn.

TIME: 7-10 minutes

1. Tell students that the class will discuss these questions as a way of reviewing the material that they just read.
2. Read aloud the questions in **Review** and invite students to respond. Provide feedback as the discussion progresses, helping to clarify meanings from the text as necessary.
3. When the discussion has concluded, ask students to share about one thing from the discussion that they want to remember.

EXPLORE ROUTINE 13
Brainstorm

AIM: Enable students to work quickly, creatively, and collaboratively to generate ideas; lead an activity based on their ideas to meet the objectives.

TIME: 10 minutes

1. Introduce the **Explore** topic. Read the instructions aloud.
2. **Say** *Now we're going to think of lots of ideas, quickly, without stopping!*
3. Have students sit in groups of three.
4. **Say** *One person in the group needs a piece of paper and a pen (or pencil). He or she will write your group's ideas down on the paper.*
5. **Say** *You have 12 minutes to write down all the ideas you can think of! Don't stop!*
6. **Say** *Go!* The activity begins. After one or two minutes, **call** *Stop!*
7. Give the students time to read the ideas on their piece of paper.
8. **Ask** *What ideas did you think of? Tell the class an idea that you like.* Lead a group discussion based on their brainstorm ideas.

EXPLORE ROUTINE 14
The 2 to 4 Discussion

AIM: Lead this discussion/activity in a way to meet the objectives while also linking into what they have learned so far.

TIME: 5–10 minutes

1. Introduce the **Explore** topic.
2. **Say** *Sit with a classmate, shoulder to shoulder. Discuss the question(s) together.* Students discuss the questions in pairs.
3. **Say** *Now join another pair and form a group of four. Sit knee to knee and share your ideas.* Students discuss the questions again, this time as a group of four.
4. Go around the classroom and listen to the pairs/groups while they are talking. Give help, if needed. Make sure students are reviewing some previous knowledge.
5. Elicit some answers from the class.

REVIEW ROUTINE 15
Test a Partner

AIM: Check and consolidate the knowledge that students should have learned today.

TIME: 5–10 minutes

1. Draw students' attention to **Review**. Explain that students are going to test each other on what they've learned this lesson.
2. **Say** *Sit with a classmate, knee to knee. Discuss the questions in your book.*
3. Move around the classroom and monitor the students. Make notes on things that they've learned incorrectly (or they've forgotten) and things they've done well.
4. **Say** *Stop now. I want to review a few things with you.* Clarify any misinformation.

REVIEW ROUTINE 16
Family Test

AIM: Check and consolidate the knowledge students should have learned today.

TIME: to be completed at home

1. Draw students' attention to **Review**.
2. **Say** *You're going to ask a family member to test you on your knowledge.*
3. **Say** *First, you are going to copy some questions on a piece of paper. Later on today, someone in your family will ask you the questions. Tell them everything you know!*
4. Have students copy the review questions to take home so that family members can test them.
5. When students return to class, follow-up by asking them: *Based on what you've learned so far, has your answer to the Engage question changed? How?*

SELF-ASSESSMENT ROUTINE 17
3-2-1

AIM: Help students complete a truthful self-assessment and find the assistance they need to further develop; encourage critical thinking.

TIME: to be completed at home

1. Draw students' attention to **Self-Assessment**. Read the first instruction aloud and point to the I can… boxes.
2. **Say** *Think about how well you can do each Objective. You have three choices: I can do it very well, I can do it OK, and I need more work. Check the correct box at home.*
3. Remind students to be honest!
4. **Say** *After you've completed the self-assessment, write a short list for me:*
   - *three things you found interesting in this lesson*
   - *two questions you still have for me*
   - *one thing you felt proud about, maybe something you did well.*

OPTIONAL: Write the list on the board for students to copy.

5. Next lesson, clarify any questions that students still have.

SELF-ASSESSMENT ROUTINE 18
Promise!

AIM: Help students complete a truthful self-assessment and find the assistance they need to further develop.

TIME: to be completed at home

1. Draw students' attention to **Self-Assessment**. Read the first instruction aloud and point to the *I can…* boxes.
2. **Say** *Think about how well you can do each Objective. You have three choices: I can do it very well, I can do it OK, and I need more work. Tick the correct box at home.*
3. Remind students to be honest!
4. **Say** *After you've completed the self-assessment, write a promise. Complete the sentence: In the next lesson, I'm going to try to… .*

OPTIONAL: Elicit some ideas from students and write them on the board, e.g.: *I'm going to… take notes during class, ask the teacher when I don't understand, participate in discussions, listen when others speak, etc.*

5. Praise students for their efforts.

VIDEO ROUTINE 19
Preview, View, Review

AIM: Enable students to use the videos productively in the lesson.

TIME: 10 minutes

1. **Say** *You are going to watch a video about (name - see lesson plan). What do you remember about him/her from the beginning of this theme?*

OPTIONAL: Allow students to flick back to the Opening pages and refresh their memories.

2. Read aloud the question(s) (see Lesson plan).
3. Have a class discussion about the question(s). Students raise their answers to make predictions about what they will see and how the questions will be answered.

OPTIONAL: Have students complete this step in pairs.

4. Play the video once or twice.
5. Students pair up and discuss the answers to the questions. Ask *Were any of your predictions correct? Which ones?*

OPTIONAL: Ask follow-up questions about the video to generate more discussion, e.g.: *What did you find surprising about the video? What did you learn that you didn't know before?*

The Theme Planner

Extension Activities
For the *Learn By doing* pages, the Teacher's Guide suggests two extension activities to further connect the lesson information to students' lives and contexts. Usually, one of these activities involves students researching some information online.

Be the Expert
This section, included only in the Teacher's Guide, provides you with further information about the lesson topic to share with students, so they will come to respect the teacher in addition to the textbook as a source of knowledge. This section also includes a teaching tip specific to that lesson, and home-school connection activity to facilitate students' communication with family members about what they are learning and doing.

Assessment
The course uses both summative and formative assessment.

Summative Assessment
Each lesson and the Theme reviews have a self-assessment section where students reflect on the lesson objectives and how well they accomplished them. The self-assessment helps students to recognize their own progress and to communicate it to family members.

Formative assessment
Assess the students throughout the year. The teacher should observe students' participation in class as well as their written work. The Review pages at the end of each theme are an excellent opportunity to assess student progress and understanding of the theme. The teacher should then make use of this information in planning revision and further discussion of the topic to support the students in areas where they have difficulty.

At the end of the term, there is a project. This feature of the course is designed to practice the skills that students have learned. It should be used by the teacher as a formative assessment task to assess student participation and progress.

The Digital Component
Every lesson in the course is available as a Digital Learning Object (DLO) on the Egyptian Knowledge Bank. Each DLO features a digital version of the book with interactive elements, such as the videos, incorporated. The DLOs are designed to be accessible on any device.

Teaching Tips

Make connections: Students learn best when they recognize the value and importance of what they are learning. Keep pointing out to students ways in which what they are studying connects to their school and their community, and invite them to share connections to their families and their own lives.

Work collaboratively: Many of the activities involve working in pairs or groups. To provide variety, let students work with different partners and groups from time to time. While students are engaged with pair and group work, circulate around the class to answer questions and help out. If you notice common areas of confusion or common questions, go over those with the whole class.

Review regularly: As students progress through the lessons, refer to previous lessons, concepts, and skills. This helps students appreciate that what they learn can be applied to many other topics and situations, not just one lesson.

Be fair: Make sure that you call on students evenly, and not just the ones who most enthusiastically volunteer answers. Keep a notebook or gradebook with the class list where you can put a tick next to students' names after they answer a question; in this way you can easily see which students haven't been called on that day. While it may not be possible to call on every student in class every day, you can make sure that over the course of a week, every student has a chance to participate. Encourage hesitant or shy students

Use higher-order thinking skills: Guide students to think critically by having them articulate the reasons behind their opinions. Ask questions such as *Can you explain why you believe that?*, *How can you test whether that is true?*, *Why do you think some people disagree with that?* Help students to see that deep understanding and learning to question and think is often more important than finding a single correct answer.

Appreciate students' work: If your classroom space allows it, display student work and projects around the room to foster students' pride in their achievements.

Keep a record: Encourage students to keep their written work in a notebook or portfolio, so that they can look back at their own progress and achievements and also share them with family members.

Create a harmonious classroom: Foster an atmosphere of inclusion and respect for diversity by discouraging competition and activities where students "win." Instead, provide opportunities for groups or the whole class to work collaboratively towards a common goal.

Respect diversity: You may have differently abled students or students with additional needs in your class, just as there are people of all abilities in the world of work and in society. Foster a sense of community in your classroom where every student feels valued. To the best of your ability, modify assignments or the classroom set-up to accommodate them without making them feel singled out or "different." For example, a student with poor vision could sit at the front of the class to see the board better, or if you had a hearing-impaired student, you could turn on captioning for the video. In fact, students of all abilities will appreciate opportunities to learn in different ways. Contact the specialist in your school if you need further advice or suggestions for specific situations.

Enjoy the course!

Pacing Guide for Theme 3

Lessons	Activities	Recommended timings	Lessons	Activities	Recommended timings
Theme opener	Theme opener	9-12 minutes	**Lesson 5 and LBD**	5.1 Objectives 5.1 Engage 5.1 Learn 5.1 Explore 5.1 Review 5.1 Self-assess 5.2 Learn by doing	2-3 minutes 2-5 minutes 10-15 minutes 10-12 minutes 5-10 minutes At home 33-34 minutes
Lesson 1: Explorer in Action	1.1 Objectives 1.1 Engage 1.1 Learn 1.1 Video 1.1 Explore 1.1 Review 1.1 Self-assess 1.2 Learn by doing	2-3 minutes 5-7 minutes 15-20 minutes 5-10 minutes 5-10 minutes 10-15 minutes At home 26-40 minutes	**Lesson 6 and LBD**	6.1 Objectives 6.1 Engage 6.1 Learn 6.1 Explore 6.1 Review 6.1 Self-assess 6.2 Learn by doing	2-3 minutes 2-5 minutes 15-20 minutes 10 minutes 5-10 minutes at home At home 32-33 minutes
Lesson 2 and LBD	2.1 Objectives 2.1 Engage 2.1 Learn 2.1 Explore 2.1 Review 2.1 Self-assess 2.2 Learn by doing	2-3 minutes 2-5 minutes 10-15 minutes 10 minutes 5-10 minutes at home At home 22-32 minutes	**Lesson 7 and LBD**	7.1 Objectives 7.1 Engage 7.1 Learn 7.1 Explore 7.1 Review 7.1 Self-assess 7.2 Learn by doing	2-3 minutes 2-5 minutes 15-20 minutes 5-10 minutes 5-10 minutes At home 55-76 minutes
Lesson 3 and LBD	3.1 Objectives 3.1 Engage 3.1 Learn 3.1 Explore 3.1 Review 3.1 Self-assess 3.2 Learn by doing	2-3 minutes 3-5 minutes 2-5 minutes 7-10 minutes 5-10 minutes at home At home 20-29 minutes	**Lesson 8 and LBD**	8.1 Objectives 8.1 Engage 8.1 Learn 8.1 Explore 8.1 Review 8.1 Self-assess 8.2 Learn by doing	2-3 minutes 3-5 minutes 3-5 minutes 20-30 minutes At home At home 30-38 minutes
Lesson 4 and LBD	4.1 Objectives 4.1 Engage 4.1 Learn 4.1 Explore 4.1 Review 4.1 Self-assess 4.2 Learn by doing	2-3 minutes 5-7 minutes 15-12 minutes 7-10 minutes At home At home 22-31 minutes	**Review**	R.1 Vocabulary R.1 Review Questions R.1 Critical Thinking R.1 Essential Question R.1 Activity	5-7 minutes 5-7 minutes 5-7 minutes 7-10 minutes 20-25 minutes



THEME 3 pp. 8–9

Digital citizenship

ESSENTIAL QUESTION
How can ICT tools benefit our lives?

AIM: To introduce the topic of the theme, which explores the world of Information Communication Technology (ICT).

TIME: 5–7 minutes

Read the Essential Question with the class. Explain that ***ICT*** refers to "Information and Communication Technology." Give an example by pointing to the video camera in the photo. Invite students to talk about other forms of ICT that they know about. Possibilities include: mp3 music files, smartphones, and the Internet. Explain that ICT is a term that covers many different kinds of devices and technology. Tell the class that this unit will help them learn more about ICT and its benefits in our daily lives.

Spotlight on Theme 3

AIM: To reflect on the prevalence of ICT in our daily lives, especially in the context of video and film production.

TIME: 4–5 minutes

Look at the photo with the class. Tell students that the man with the camera is a filmmaker. Ask students to guess where he is and what kind of movie he might be making.

Explain that filmmakers and videographers make a wide range of movies in different formats and genres. Some of them, for example, make documentaries about real life. Others make short films that tell stories. And then there are also filmmakers who make full-length movies with stories (or plots) that are much more complicated. Invite students to talk about movies that they have seen at a movie theater or at home with their family.

Follow up by asking students to read the Spotlight text in pairs so they can learn more about the theme. Afterwards, invite volunteers to share what they have learned.

LESSON 1 pp. 10–11

EXPLORER IN ACTION

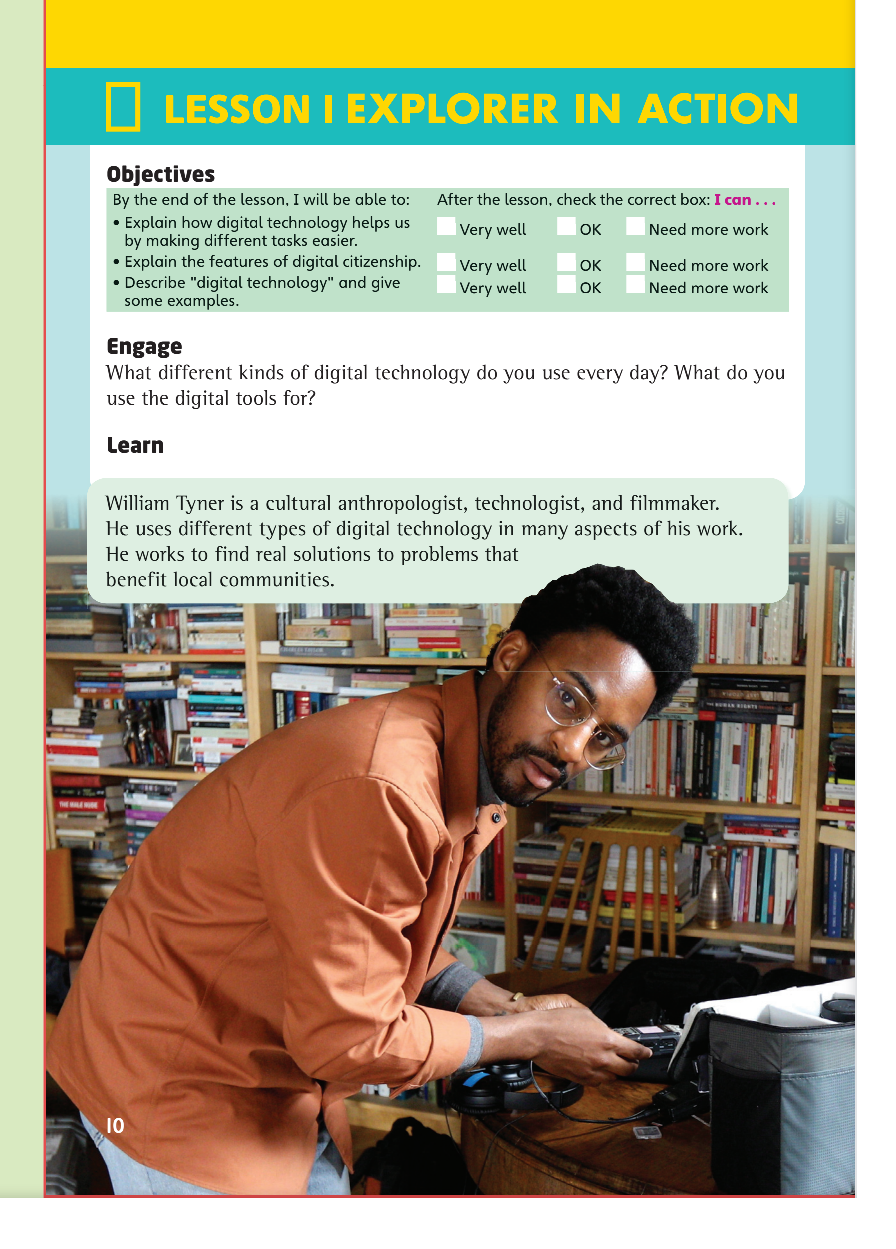
OBJECTIVES
- Explain how digital technology helps us by making different tasks easier.
- Explain the features of digital citizenship.
- Describe “digital technology” and give some examples.

LIFE SKILLS
- Learning to know: critical thinking; formulate questions

VALUES
- Academic values: appreciation of technology

ISSUES AND CHALLENGES
- Globalization issues: digital citizenship

MATERIALS NEEDED
- Poster paper or whiteboard; markers (Engage)
- Access to computers and/or smartboard (Be the Expert; Teaching Tip)



LESSON 1 EXPLORER IN ACTION

Objectives

By the end of the lesson, I will be able to:	After the lesson, check the correct box: I can . . .		
• Explain how digital technology helps us by making different tasks easier.	Very well	OK	Need more work
• Explain the features of digital citizenship.	Very well	OK	Need more work
• Describe "digital technology" and give some examples.	Very well	OK	Need more work

Engage

What different kinds of digital technology do you use every day? What do you use the digital tools for?

Learn

William Tyner is a cultural anthropologist, technologist, and filmmaker. He uses different types of digital technology in many aspects of his work. He works to find real solutions to problems that benefit local communities.

10

OBJECTIVES

AIM: To engage students’ interest in the lesson objectives and content.

TIME: 2–3 minutes

- Follow the steps for **Routine 1: Time to Explore!**
  1. Draw students’ attention to the Lesson topic. Say This lesson we’re going to learn about digital technology and other related topics.
  2. Read the objectives aloud to the class.
  3. Write on the board *Now’s our chance to explore …* To ensure that students think in detail about the objectives, write more actions directly below *explore*, e.g.,: *think about, learn about, study, discuss, look at, investigate, consider, plan.*
  4. Give students a minute to look at the lesson and assess what they’ll explore.
  5. Elicit answers from individual students, e.g.; **Now’s our chance to … learn about apps and other kinds of communication technology, explore the benefits of ICT in our daily lives, etc.**
  6. Say By the end of this lesson, you’ll be able to do all these things!

ENGAGE

AIM: To help students achieve the Lesson Objectives by organizing ideas and information in a graphic organizer.

TIME: 5–7 minutes

1. In the middle of the board or on chart paper, draw a chart with two columns labeled *Different Kinds of Digital Technology* and *How We Use Them*.
2. Ask the class to help you fill in the chart with their own ideas. Provide a few examples to help them get started:

Different Kinds of Digital Technology	How We Use Them
Apps	To make appointments, get directions, etc.
Online videos	To learn about new things
Smartphones	To make phone calls, send messages, and take photos

OPTIONAL: Have students copy the chart in their books or on note paper to help them keep track of their ideas as they go through the unit.

LEARN

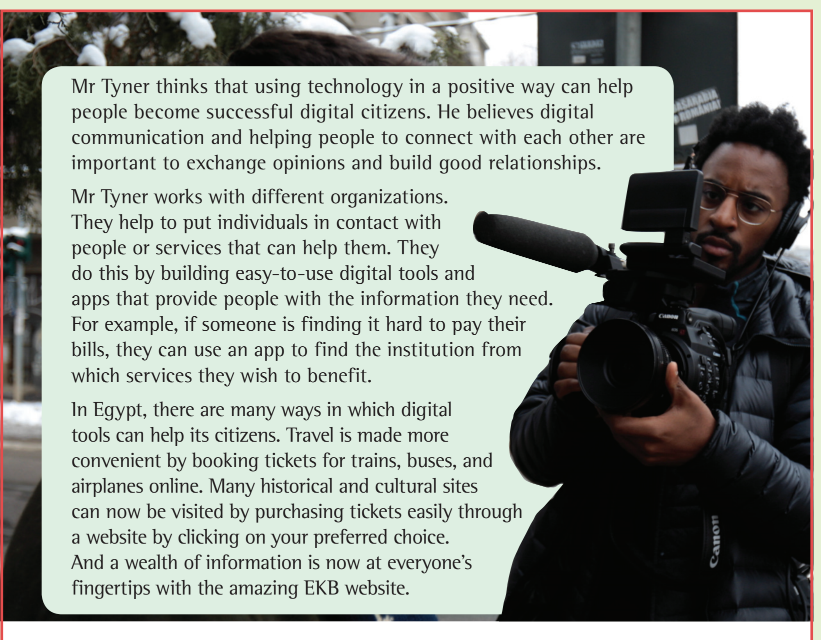
AIM: To enable students to read text in a way that maintains their interest; to help students improve their own reading ability.

TIME: 15–20 minutes

Introduce the topic. Say Now we're going to read about Mr. Tyner and learn how he uses digital technology in his work.

- Follow the steps for **Routine II: Buddy Reading.**
  1. Form pairs. Students sit with a classmate, preferably with a similar reading ability, shoulder to shoulder.
  2. Say You're Reading Buddies. That means you're reading friends, so your job is to help each other. You're going to take turns reading the text to each other. If you're reading, remember you can ask for support from your Reading Buddy, or even ask them to take over for a while. I'll be moving around the classroom if you need me.
  3. Point to the first paragraph of the text. Tell students to take turns reading each paragraph aloud to their partner.
  4. While Reading Buddies work together, circulate through the room and provide help with pronunciation and comprehension as necessary.
  5. To speed up the lesson, shout My turn! and read a section aloud. Then hand over the next section to the buddies. Continue alternating like this, so that they receive practice listening to you, as well as to each other.
  6. When students are finished reading the paragraph, ask questions to check comprehension: Why does Mr. Tyner think that technology can be used in a positive way to help people become successful digital citizens? **He believes digital communication is a powerful tool that helps people connect with each other.** How does *he* help put people in contact with services that they need? **He makes digital tools and apps that help people find information about important services, including institutions that can help with specific needs.** According to Mr. Tyner, what is one important way of promoting digital citizenship? **Making travel more accessible.**

<table>
<tr><th colspan="6">Teaching support for an integrated classroom</th></tr>
<tr><th>Intellectual disability and slow learning</th><th>Autism</th><th>Hearing impairment</th><th>Learning disability</th><th>Motor disability and cerebral palsy</th><th>Blind and weak sighted</th></tr>
<tr><td colspan="4">- Writing the vocabulary (digital technology) on the board or highlighting it in the Student's Book.
- Giving a lot of examples about digital technology while simplifying its explanation.
- Summarizing the text concerning William Tyner</td><td>- Supporting students suffering from motor disability and cerebral palsy by asking their classmates to help them write.
- Making their responses simpler, they could be oral responses, signs or hand gestures, or answers via a computer, if possible.
- Including them in groups and giving them tasks according to their disabilities.</td><td>Describing pictures for the blind and displaying them zoomed for the weak sighted.</td></tr>
</table>



Mr Tyner thinks that using technology in a positive way can help people become successful digital citizens. He believes digital communication and helping people to connect with each other are important to exchange opinions and build good relationships.

Mr Tyner works with different organizations. They help to put individuals in contact with people or services that can help them. They do this by building easy-to-use digital tools and apps that provide people with the information they need. For example, if someone is finding it hard to pay their bills, they can use an app to find the institution from which services they wish to benefit.

In Egypt, there are many ways in which digital tools can help its citizens. Travel is made more convenient by booking tickets for trains, buses, and airplanes online. Many historical and cultural sites can now be visited by purchasing tickets easily through a website by clicking on your preferred choice. And a wealth of information is now at everyone's fingertips with the amazing EKB website.

Video
Watch the video about William Tyner's work. What ICT tools did they use?

Explore
You don't need to be part of a technology project to have experience of digital citizenship. All schools encourage students to learn about how to use technology responsibly, safely, and intelligently. How does William Tyner use ICT tools in a way that makes him a digital citizen? What interests you most about William Tyner's work, and why?

Review

1. Think of examples of using ICT tools in daily life.
2. How can ICT tools be used by organizations and governments to help local communities?

Self-assess
Go to the Objectives at the beginning of the lesson.
Check the correct I can . . . box.

11

BE THE EXPERT

William Tyner does research in the field of user experience. He is also an educator, filmmaker, and photographer with a background in anthropology, which is the study of human races, societies, and cultures. As he says on his website, he seeks in his work to "uncover and communicate powerful stories that inspire us to design a more inclusive future." That's a future that includes everyone. You can learn more about him by visiting his website at http://www.williamtyner.com/about. Mr. Tyner's collection of photos and short documentaries is constantly changing, so it is a good idea to preview his site before visiting with the class to ensure that the content is appropriate.

TEACHING TIP

Consider helping students to curate an exhibit of their own photos using an online platform such as padlet.com (although you should be sensitive about directing students to sites that require them to set up an account, as this will require parental permission). Alternatively, set up a padlet account yourself and start an exhibit that students can access directly via a link that you provide.

HOME-SCHOOL CONNECTION

Life skill: Academic values: appreciation of technology

Have students ask family members if they know of any filmmakers, photographers, or designers. Invite them to share what they learned with the class.

VIDEO

AIM: To learn more about Mr. Tyner's work in helping people to become successful digital citizens.

TIME: 5-10 minutes

- Follow the steps for **Routine 19: Preview, View, Review.**
  1. Say You are going to watch a video about William Tyner. What do you know about him so far?
  2. Encourage students to answer with as much detail as they can.
  3. Read aloud the question at the beginning of the video: How can you be a responsible digital citizen?
  4. Play the video once or twice.
  5. Form pairs of students and have them discuss their answers to the questions.

     (Suggested answers: **Digital citizens think critically about how they use communication technology. They participate responsibly with other users, and they take ownership of what they are doing.**)

OPTIONAL: What did you find surprising about the video? What did you learn that you didn't know before?

EXPLORE

AIM: To discuss and learn about strategies for becoming successful digital citizens.

TIME: 5–10 minutes

1. Introduce the topic. Say Now we are going to learn about strategies that can help us become successful digital citizens.
2. Read the text aloud, and then discuss the questions at the end of the paragraph. Say Mr. Tyner is very good at using digital technology. He connects with other people and helps them get the services they need. In this way, he uses technology to improve people's lives.

- Follow the steps for **Routine 14: The 2 to 4 Discussion.**
  3. When groups are finished, invite them to share what they are interested in learning about. Write the questions they have on the board.

OPTIONAL: Encourage more critical thinking by helping students prioritize the questions they have about Mr. Tyner and his work. Ask Which question is most important to you? Let's put that one at the top of the list. Continue in this way until all of the questions have been arranged in order of priority. Revisit the list as you go through the theme to help students find out if their questions have been answered.

REVIEW

AIM: To check and consolidate the knowledge that students should have learned today.

TIME: 10-15 minutes

- Follow the steps for **Routine 15: Test a Partner.**
  1. Draw students' attention to Review. Explain that students are going to test each other on what they've learned this lesson.
  2. Say Sit with a classmate, knee-to-knee. Discuss the questions in your book.
  3. Move around the classroom and monitor the students. Make notes on things that they've learned incorrectly (or they've forgotten) and things they've done well.
  4. Say Stop now. I want to review a few things with you. Clarify any misinformation.

SELF-ASSESS

AIM: To help students complete a truthful self-assessment and find the assistance they need to further develop; to encourage critical thinking.

TIME: to be completed at home

- Follow the steps for **Routine 17: 3-2-1.**
  1. Draw students' attention to **Self-Assess**. Read the first instruction aloud and point to the I can… boxes.
  2. Say Think about how well you can do each Objective. You have three choices: I can do it very well, I can do it OK, and I need more work. Check the correct box at home.
  3. Remind students to be honest!
  4. Say After you've completed the self-assessment, write a short list for me:
     - three things you found interesting in this lesson
     - two questions you still have for me
     - one thing you felt proud about, maybe something you did well

OPTIONAL: Write the list on the board for students to copy.

5. Next lesson, clarify any questions that students still have.

Teaching support for an integrated classroom					
Intellectual disability and slow learning	**Autism**	**Hearing impairment**	**Learning disability**	**Motor disability and cerebral palsy**	**Blind and weak sighted**
- Playing the video about the explorer William Tyner, by sectioning it and playing one section at a time, commenting on it and deducing its main idea, then moving on to the rest of the sections and do the same. - Facing hearing impaired students while commenting on the videos.				- Supporting students by asking their classmates to help them write. - Making their responses simpler, they could be oral responses, signs or hand gestures, or answers via a computer, if possible. - Including them in groups and giving them tasks according to their disabilities.	Describing the content of the videos to the blind.

LESSON 1 pp. 12–13



LIFE SKILLS

AIM: For students to reflect on the apps that they enjoy using with their parents and other family members.

TIME: 3–5 minutes

1 Read and answer

1. Read aloud the question: What apps do you or your parents use regularly?
2. Start a Mind Map by writing the phrase Apps /Websites We Love in the center of the board.
3. As students share about the apps and websites they enjoy using with their parents and other family members, add the name of each one to the Mind Map.
4. When you are finished, review the Mind Map with the class. Tell students that they will learn more about these and other apps /websites as they go through the unit.



LESSON 1 EXPLORER IN ACTION

Life Skills

1 Read and answer

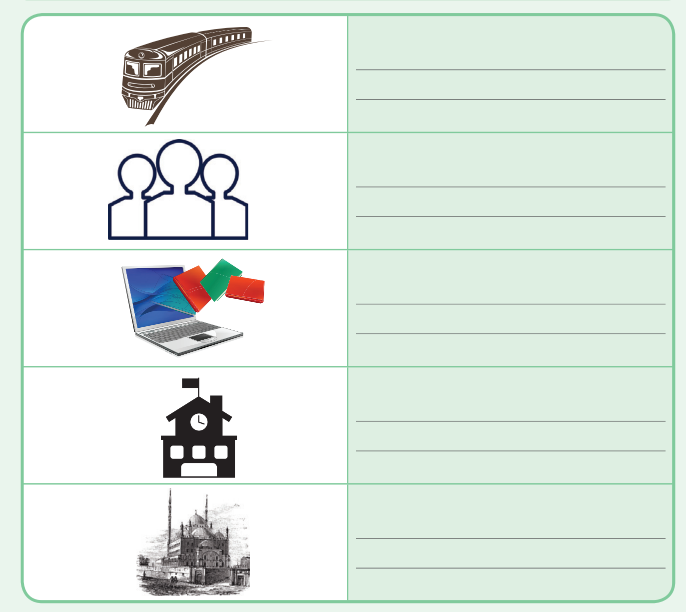
Apps and websites can help make things more accessible to all of us. What apps and websites do you or your parents use regularly?

Graphic Organizer

2 Read and complete

Read the names in the box, then label each image with the correct name.

Egyptian Knowledge Bank Ministry of Tourism and Antiquities
Ministry of Education Ministry of Health and Population
Egyptian National Railways



12

GRAPHIC ORGANIZER

AIM: To discuss and learn about apps that serve students' local communities and schools.

TIME: 3–5 minutes

2 Read and complete

1. Read the directions aloud and then point out that the labels are contained in the green box. Below are five pictures that represent each app. Tell students they will look at the pictures and then decide where the labels go.
2. Read aloud the labels in the green box. Then work through the first picture symbol together. Ask What does this picture show us? **A train** Which app has to do with trains? **Egyptian National Railways**
3. Have students match each label with its picture symbol independently.
4. When they are finished, help students check their answers. Confirm that second picture represents a group of people, or a population, It is represents the Ministry of Health and Population. The third picture looks like books, or information, emerging from a laptop. It represents the Egyptian Knowledge Bank. The fourth picture looks like a school. It represents the Ministry of Education. Finally, the last picture looks like an ancient city. Which app do you think this represents? **the Ministry of Tourism and Antiquities**. Invite students to talk about the apps that serve their local community.

Critical Thinking

3 Think and answer

Look at the following situations and decide which organization from Activity 2 would help you find out the information.

1. The library in your local area is closed, and you need to look for some reference books.

2. You want to know when your school exams are.

3. One of your neighbors needs help booking a train ticket.

4. Your family wants to book tickets to visit The Egyptian Museum in Cairo.

5. You want to register your data or the data of a member of your family so you can get the Covid 19 vaccine.

4 Think and answer

Imagine you are going to do an interview with someone from your community to find out more about an issue that affects people in the city or neighborhood in which you live. Plan your interview.

Choose a topic that you're interested in:

Decide what information you want to find out:

Write three detailed questions:

Possible solution to the issue:

13

CRITICAL THINKING

AIM: To help students identify apps within their community that can help them access useful information and services.

TIME: 10–15 minutes

3 Think and answer

1. Form pairs of students. Tell students that each item in this section describes a situation. Say As we read each item aloud, I want you to think about an app that would be useful in that situation.
2. Read the first item aloud. Pause and give students time to work out the answer with their partner. Confirm the answer for them, saying If the local library is closed, a great place to do research and find information is the Egyptian Knowledge Bank.
3. Continue in this way, reading aloud each item and giving students time to work out the answer. Pause as you go along, providing feedback so that students can check their answers. (Suggested answers: **2. To find out when your school exams are, you would go to the Ministry of Education, find your school, and access dates for your exams. 3. To book a train ticket for your neighbor, go to Egyptian National Railways. 4. To book tickets to visit The Egyptian Museum in Cairo, the Ministry of Tourism and Antiquities is the app for you! 5. And, to register your data to get a Covid 19 vaccine, go to the app that deals with matters of health: the Ministry of Health and Population.**)

AIM: To plan for an interview with a member of your local community.

TIME: 10–15 minutes

4 Think and answer

1. Read aloud the directions and the prompts. Verify that students understand what they are supposed to do.
2. Form pairs or small groups. Have students work together in writing their responses to each of the prompts.
3. Invite groups to share the responses that they wrote to the prompts. Provide feedback as necessary.

EXTENSION ACTIVITIES

1. Have students role-play interviews using the questions that they wrote. One student can take the role of interviewer, and the other student can take the role of interviewee. Give students time to practice their interviews, and then have them present their role plays to the class.
2. If possible, help students submit the questions they wrote to a local official who might be able to help with the issue or problem. Students might be able to submit their questions through a local website, for example, or you might be able to help them find the email address of an appropriate representative.

LESSON 2 pp. 14–15

Digital citizenship

OBJECTIVES

- Explain what it means to be a digital citizen.
- Explain key concepts of digital citizenship.
- Discuss how to use ICT tools ethically, responsibly, and safely.

LIFE SKILLS

- Learning to be: sharing
- Learning to live together: communication

VALUES

- Co-existence values: tolerance and acceptance of others

ISSUES AND CHALLENGES

- Globalization issues: digital citizenship
- Citizenship issues: awareness of rights and responsibilities

MATERIALS NEEDED

- Pieces of papers and pencils (Review)
- Poster paper or whiteboard; markers (Comprehension)

LESSON 2 Digital citizenship

Objectives

By the end of the lesson, I will be able to:	After the lesson, check the correct box: **I can . . .**		
• Explain what it means to be a digital citizen.	Very well	OK	Need more work
• Explain key concepts of digital citizenship.	Very well	OK	Need more work
• Discuss how to use ICT tools ethically, responsibly, and safely.	Very well	OK	Need more work

Engage

What do you think it means to be a digital citizen?

Learn

Digital citizenship is the ability to use digital technology ethically, responsibly, and safely. This helps you to enjoy and take advantage of digital technology, and protects your **digital footprint**.

In Term 1, you learned some techniques that are part of digital citizenship. You learned how to:

- be **ethical and responsible** by treating others online with respect, and by crediting sources you find online.
- stay **safe** online by setting strong passwords and choosing websites you visit wisely, using updated software, and monitoring online screen time.

Digital footprint: Your digital footprint is a record of what you do online, including the sites you visit and the things you post; it can also include things that others post about you. This is why it's important to share information about yourself and others safely and responsibly.



14

OBJECTIVES

AIM: To ensure that students understand the objectives of the lesson.

TIME: 2–3 minutes

- Follow the steps for **Routine 3: Understanding Objectives**.
    1. Draw students' attention to the objectives of the lesson. Say To meet the objectives of a lesson, it's a good idea to make sure that you understand what the objectives are actually saying.
    2. Read the objectives aloud to the class.
    3. Ask Are there any words or phrases in the objectives that you don't understand? What are they?
    4. Explain any unfamiliar terms or vocabulary. Some students, for example, may be unfamiliar with the word *ethically*. Explain: When you act ethically, it means you are doing what is right and fair—not just for yourself, but for everybody else, too.
    5. Remind students they will check the I can… boxes after completing the lesson.

ENGAGE

AIM: To engage students in a discussion that relates to the issue of digital citizenship; to use critical thinking to investigate clues in photos.

TIME: 2–5 minutes

- Follow the steps for **Routine 5: Photo Detectives!**
    1. Draw students attention to **Engage**. Tell students to cover the photos with a book.
    2. Read the Engage questions aloud.
    3. Elicit some quick answers from the class.
    4. Say You're going to be photo detectives! Uncover the photos and look for clues!
    5. Say Sit knee-to-knee. Investigate the photos. Tell each other what you find.
    6. Read the **Engage** question again. Elicit answers from individual students. (Suggested answers: **The boy is thinking about the different elements of good digital citizenship, such as "etiquette," or obeying the rules of politeness; communicating respectfully online; honesty in "commerce," or buying and selling things that you have the money to buy or the right to sell; maintaining your own "security" by setting strong passwords and not invading the security or privacy of others; etc. The girl is also being a good digital citizen because she is using her computer to connect with other people. She and her friends are creating a kind of online community, respectfully looking at one another and taking turns as they talk.**)

LEARN

AIM: To enable students to read text in a way that maintains interest.

TIME: 10–15 minutes

- Follow the steps for **Routine 10: Popcorn Reading.**
    1. Say We're going to try Popcorn Reading now. I'll ask a student to read aloud. When I say "Popcorn," that student should stop, look around, quickly choose the next person to read and say their name.
    2. Remind the class Remember that you must choose a NEW person; don't choose the person who just read! And stay on your toes, because you could be called at any time!
    3. Assign the first person to read aloud. The other students read along silently.
    4. Call "Popcorn" when the reader reaches a logical point in the text (e.g., the end of a paragraph, bullet point, or chunk of text in the chart). That reader shouts the name of the next person to read.
    5. Note: Remind students to read the definitions for digital footprint and piracy.

OPTIONAL: Instead of calling out their name, the reader could tap another student on the shoulder.

6. The activity continues in this way, in the form of a Round Robin, until you reach the end.

Teaching support for an integrated classroom					
Intellectual disability and slow learning	**Autism**	**Hearing impairment**	**Learning disability**	**Motor disability and cerebral palsy**	**Blind and weak sighted**
- Writing the vocabularies (digital citizenship, digital footprint) on the board or highlighting them in the Student's Book. - Highlighting the names of the platforms WhatsApp, Facebook, and Skype in the Student's Book.				- Supporting students suffering from motor disability and cerebral palsy by asking their classmates to help them write. - Making their responses simpler, they could be oral responses, signs or hand gestures, or answers via a computer, if possible. - Including them in groups and giving them tasks according to their disabilities.	- Describing pictures for the blind and displaying them zoomed for the weak sighted. - Using the screen reader for the (WhatsApp, Facebook, and Skype) platforms.

As a digital citizen, you have certain rights and responsibilities.

Rights	Responsibilities
You have the right to not have your digital footprint copied or shared without your consent. If you upload videos, songs or stories you've created to the internet, you have the right to protection from piracy. (Piracy is the illegal circulation of content to be shared or sold to others.)	You must never commit piracy, with the aim of sharing or selling digital content to others.
You have the right to engage with others online. This includes communicating with family, teachers, and friends. It may also include posting positive ideas to help your community, and expressing your opinions in a way that doesn't offend others.	You should always show positive behavior in your communication online. A good rule is to share with your classmates and friends things you are comfortable saying face to face and positive things.
You have the right to provide and to access information and entertainment online while respecting intellectual property rights, and crediting the resources from which you took the information.	Be sure to evaluate what you're viewing or about to share. Ask: Is the source information safe to view and share? Is the source material a result of **piracy**?
You have the right to use the internet when you need or want to, while respecting the law.	Evaluate how you're using the internet. Is what you're looking at a productive use of time? Does it bring you joy, or does it cause you stress? Is the material safe? A good online/in-person balance is important for your well-being.

Explore

Imagine you've done one of the following:

- Thought of ways to connect people of determination in your community to volunteers who wish to help them in challenging everyday tasks
- Filmed a video explaining how to reduce community waste



How would you responsibly and effectively share this information online? Discuss with a partner.

Review

1. Explain the rights and responsibilities of digital citizenship.
2. Give examples of how you use ICT tools ethically, responsibly, and safely.

Self-assess

Go to the Objectives at the beginning of the lesson.
Check the correct I can . . . box.

15

BE THE EXPERT

The term "digital footprint" refers to the information that internet users leave behind while they're online. It includes websites they have visited, services and products they have paid for, photos and comments they have posted on social media, etc. Some of this information can be personal, leaving internet users vulnerable to identity theft and other cybercrimes. This is especially true for minors, who typically leave behind a much longer trail of information than older users. It has been estimated, for example, that many of the children and teens of today will have created 70,000 posts by the time they reach the age of 18.

TEACHING TIP

Ask students if they know the meaning of the word *netiquette*. Confirm that it's a combination of the words *net* and *etiquette*, which refers to rules of politeness. Have them collaborate in creating a poster of netiquette Do's and Don'ts. You can help them get started by giving suggestions such as *Do be respectful*, *Do remember that all your posts are public*, *Don't post pictures of other people without their permission*, *Don't spread rumors or gossip*, etc.

HOME-SCHOOL CONNECTION

Life skill: Learning to live together: communication

Have students ask parents or caretakers if their family has any particular rules or guidelines on how to use the internet safely. Encourage students to share them with the class.

EXPLORE

AIM: To enable students to work quickly, creatively, and collaboratively to generate ideas; to lead an activity based on their ideas to meet the objectives.

TIME: 10 minutes

- Follow the steps for **Routine 13: Brainstorm.**
  1. Introduce the **Explore** topic. Read the instructions aloud.
  2. Say Now we're going to think of lots of ideas, quickly, without stopping!
  3. Have students sit in groups of three.
  4. Say One person in the group needs a piece of paper and a pen (or pencil). He or she will write your group's ideas down on the paper.
  5. Say You have two minutes to write down all the ideas you can think of! Don't stop!
  6. Say Go! The activity begins. After one or two minutes, call Stop!
  7. Give students time to read the ideas on their pieces of paper.
  8. Ask What ideas did you think of? Tell the class the idea that you like best. (Suggested answers:
  (**To find volunteers willing to work with people of determination, you can post notices on social media accounts associated with your neighborhood or community. You should not post the person of determination's name, however, because that would be violating his or her privacy. Similarly, you could post a video explaining how to reduce waste on a social media account or virtual bulletin board, but you should be careful not to show identifying information of individual people, like their car or home address.**)

REVIEW

AIM: To check and consolidate the knowledge that students should have learned today.

TIME: to be completed at home

- Follow the steps for **Routine 16: Family Test.**
  1. Draw students' attention to Review.
  2. Say You are going to ask a family member to test you on your knowledge.
  3. Say 'First, copy the two questions on a piece of paper. Later on today, ask someone in your family to read the questions aloud. Tell them everything you know!
  4. Have students copy the prompts to take home so that family members can test them.
  5. When students return to class, follow-up by asking them: Based on what you've learned so far, has your answer to the **Engage** question changed? How?

SELF-ASSESS

AIM: To help students complete a truthful self-assessment and find the assistance they need to further develop.

TIME: to be completed at home

- Follow the steps for **Routine 18: Promise!**
  1. Draw students' attention to Self-Assessment. Read the first instruction aloud and point to the I can… boxes.
  2. Say Think about how well you can do each Objective. You have three choices: I can do it very well, I can do it OK, and I need more work. Check the correct box at home.
  3. Remind students to be honest!
  4. Say After you've completed the self-assessment, write a promise. Complete the sentence: *In the next lesson, I'm going to try to . . .*

OPTIONAL: Elicit some ideas from students and write them on the board, e.g., *I'm going to . . . take notes during class, ask the teacher when I don't understand, participate in discussions, listen when others speak,* etc.

  5. Praise students for their efforts.

LESSON 2 pp. 16–17



COMPREHENSION

AIM: To reflect on the rights and responsibilities that come with digital citizenship.

TIME: 5–7 minutes

1 Look and write. Then answer the question

1. Read aloud the directions. Then read aloud the first item in the chart: You have the right to engage with others online.
2. Ask students to think of an example of how this right can be used responsibly. If necessary, make a suggestion, such as: Be positive. If you can't think of anything positive to say, you don't have to say anything at all!
3. On the board, recreate the chart shown in the Student Book. Write down the example generated during your discussion, and have students copy it in their books.
4. Form pairs of students. Have partners work together in filling out the examples for Items 2 and 3.
5. Invite students to share their answers with the class. Use their responses to complete the chart on the board. (Suggested answers: **2. If you post something from another source, let your readers know where it came from. 3. Don't spend long stretches of time online without any breaks. You should get up and walk away from your device every 25-30 minutes.**)



LESSON 2 Digital citizenship

Comprehension

1 Look and write. Then answer the question

Complete the chart. Read the rights of digital citizenship. Provide an example of how you can use each right responsibly.

Rights	Example
1. You have the right to engage with others online.	
2. You have the right to gather and post information and entertainment online.	
3. You have the right to use the internet when you want to.	

Create a new right that can be connected to digital citizenship. How can you use this right responsibly?

2 Think and write

Provide an example of how you can achieve each of the following:

1. being a good digital citizen
2. leaving a positive digital footprint
3. sharing with your colleagues and friends information published on the internet
4. avoiding piracy

16

AIM: To discuss and give examples that illustrate the principles of positive digital citizenship.

TIME: 7–10 minutes

2 Think and write

1. Read the directions aloud and then form groups of three students.
2. Have groups work together in providing examples of how they can be good digital citizens, leave positive digital footprints, share information from the Internet, and avoid piracy. Have students write down their ideas in the appropriate spaces as they go through the items.
3. Reconvene the class. Use students' written responses as the basis for discussion. Ask for example: How can we be good digital citizens? Field responses from the class, and provide feedback as necessary. (Suggested answers: **1. You can be a good digital citizen by respecting the privacy and feelings of other users. 2. To leave a positive digital footprint, we should only post information that is accurate. 3. Share information that would helpful, enlightening, or fun; never share gossip or something that would hurt someone you know. 4. We can and should avoid piracy by not posting photos and videos that are meant for sale.**)

Critical Thinking

3 Think and answer

Think about what you have learned about digital citizenship. Read the scenarios below. Explain how you would handle each one.

1. You read a blog that talks about the best food to eat for breakfast. However, you disagree with the blogger's opinion. You want to write a response to share your thoughts on what you think is a healthier and tastier breakfast option. How do you express your opinion in a positive way?

____
____
____

2. You've noticed lately that your friend is constantly online. He/She seems cranky and tired. Who do you talk to about this? What do you say?

____
____
____

ICT and me

4 Think and answer



Can you think of a time in your daily use of ICT tools when you or someone you know was a good digital citizen? Discuss this situation with your teacher and classmates.

____
____
____
____
____
____
____
____
____
____
____
____

17

CRITICAL THINKING

AIM: To brainstorm and write about positive ways of responding to others—both online as well as in person.

TIME: 7–10 minutes

3 Think and answer

1. Read aloud the directions, then read the first item. Invite students to share their ideas on how to respond to the blogger in a positive way. (Suggested answer: **1. You can start off by saying it's a great idea and then adding an idea of your own.**)
2. When you are finished discussing the first item, have students write their responses in their books.
3. Repeat the procedure for the second item: read aloud the questions, brainstorm responses, then have students write their ideas in their books. (Suggested answer: **2. Don't make judgments. Ask questions so that your friend feels free to share.**)

ICT AND ME

AIM: To think and write about an instance of good digital citizenship.

TIME: 3–5 minutes

4 Think and answer

1. Read aloud the directions and the questions.
2. Give students a few moments to write down an example of a time when they or somebody they know was a good digital citizen. Remind them that this an opportunity for them to write about their own experiences. There are no right or wrong answers.
3. When students are finished, invite two or three volunteers to share what they wrote about.

EXTENSION ACTIVITIES

1. Invite students to talk about online situations in which they weren't sure what to do. Ask the class to help you brainstorm possible responses. Provide feedback as necessary, emphasizing the principles of safety, respect, and accountability.
2. For students who are unwilling to share in class (perhaps due to privacy issues), create a box or envelope where students can submit a written question. Tell them that you will respond to their questions privately, during a break or after class.

LESSON 3 pp. 18–19

Positive impacts of ICT

OBJECTIVES

- Explain how ICT tools can aid me socially, intellectually, and educationally.
- Discuss the efforts made by the Egyptian government in providing safe and reliable digital resources.
- Discuss how technology provides support for people of determination.

LIFE SKILLS

- Learning to be: sharing
- Learning to live together: communication

VALUES

- Work values: proficiency; cooperation

ISSUES AND CHALLENGES

- Globalization issues: technological awareness
- Discrimination issues: equal access for people of determination

MATERIALS NEEDED

- Classroom computer connected to a smartboard (Comprehension, Critical Thinking, Extension Activities)

LESSON 3 Positive impacts of ICT

Objectives

By the end of the lesson, I will be able to:	After the lesson, check the correct box: **I can . . .**		
• Explain how ICT tools can aid me socially, intellectually, and educationally.	Very well	OK	Need more work
• Discuss the efforts made by the Egyptian government in providing safe and reliable digital resources.	Very well	OK	Need more work
• Discuss how technology provides support for people of determination.	Very well	OK	Need more work

Engage

How have ICT tools made your life easier?

Learn

As a digital citizen, you use ICT tools to learn, to share, and to communicate.

In 2018, the Egyptian government provided digital tools and resources that can help you enjoy your time through digital books, activities, and watching videos and TV channels presented by experts in educational materials.

Its goal is to implement a skill-based education, and ensure that all students can access learning materials equally.



Digital devices can help a non-verbal person communicate and to learn languages at school, using pictures. For students who can't leave their home due to health or other issues, digital devices can provide them with the connection they need to teachers, and the material they need to learn.

18

OBJECTIVES

AIM: Encourage students to take responsibility for their own learning needs and paths.

TIME: 2–3 minutes

- Follow the steps for **Routine 2: What Do I Need to Do?**
  1. Draw students' attention to the objectives of the lesson. Say This lesson we're going to learn about the positive impacts of information communication technology, or ICT.
  2. Read the objectives aloud to the class. OPTIONAL: Ask Which objectives can you already do? Elicit some ideas.
  3. Ask What kinds of things will we need to pay attention to during the theme?
  4. Elicit ideas from the students, e.g., **We need to pay attention when we are learning about different kinds of ICT tools and the ways in which they are helpful.**
  5. Write students' ideas on the board and remind students to pay attention to them during the lesson.

ENGAGE

AIM: To enable students to participate confidently and collaboratively in a class discussion that leads to the objectives of the lesson.

TIME: 3–5 minutes

- Follow the steps for **Routine 4: Think-Pair-Share.**
  1. Draw students' attention to **Engage**.
  2. Say I'm going to ask you a question. Don't say anything! Just think about it quietly.
  3. Read aloud the question. Let students think silently about some possible answers. They may make simple notes if they wish.
  4. After a minute, say Now sit shoulder-to-shoulder with a classmate and share ideas. You can make notes, but keep them very short.
  5. Check that the students are comparing their ideas with a classmate.
  6. Say I'm going to ask the question again. This time, put up your hand to answer.
  7. Read the question aloud again. Call on students with their hands up and have them share their ideas with the class. They can refer to their notes but shouldn't read whole sentences aloud.

OPTIONAL: To encourage more discussion, ask follow-up questions <Name>, what do you think? Why do you think that? Can you give an example? etc.

LEARN

AIM: To activate students' background schema and encourage them to anticipate the content so they can build context before reading.

TIME: 2–5 minutes

- Follow the steps for **Routine 6: Preview.**
  1. Say Previewing an article before you read can help you build context. You will have an idea what the article is about before you even start reading. It's a good habit to get into because it will help you understand and remember what you read.
  2. Read aloud the first sentence. Tell students that the first sentence of a reading passage is called a "topic statement." It gives the main idea of the article and the ideas or information that will be covered.
  3. Direct students' attention to the subheads. Say Subheads also give clues about the ideas and information that will be covered. Based on the subheads you see here, what do you think the article is about? Listen to student responses and provide feedback that helps them focus on the ideas suggested by the subheads.
  4. Tell students to keep their guesses in mind as they read the article. When they finish, ask if their guesses were correct.

OPTIONAL: Write guesses (both correct and incorrect) on the board. Refer to them during the lesson, i.e., *Nour guessed we would learn about FaceChat and other similar apps. She was right!*

Teaching support for an integrated classroom

Intellectual disability and slow learning	Autism	Hearing impairment	Learning disability	Motor disability and cerebral palsy	Blind and weak sighted
- Writing the vocabularies (video-sharing platforms, socializing) on the board or highlighting them in the Student's Book. - Displaying the platforms logos in their real state along with their names (WhatsApp, Facebook, Skype).				- Supporting students suffering from motor disability and cerebral palsy by asking their classmates to help them write. - Making their responses simpler, they could be oral responses, signs or hand gestures, or answers via a computer, if possible. - Including them in groups and giving them tasks according to their disabilities.	- Describing pictures for the blind and displaying them zoomed for the weak sighted. - Using the screen reader to display these platforms for the blind.

Digital devices can also be beneficial when unexpected events affect us, making us unable to leave our homes.

In addition to providing Egyptian citizens with access to learning materials in the digital library, the EKB holds webinars for teachers, students, and parents. The webinars provide guidance and tips on how to register on the website and use it.



Egyptian Knowledge Bank
بنك المعرفة المصري

Video-sharing platforms

You can use video-sharing platforms to learn or to teach new things. For example, if you want to learn how to create healthy meals, you can search for a video to show you how, step-by-step! If you have a skill you'd like to share online, you can use a video-sharing platform to post your own video, too. Remember to ask your teacher or a member of your family before you post anything online.

Socializing

You can socialize online as well. You can work with classmates outside of school on a project, virtually. You can video chat with your friends. You may even join an online group that shares your interests. Some common interests could include sports, movies, and games, like chess. Remember to ask an adult's permission before you join a group or communicate with someone online.

Common communication apps are the messaging app WhatsApp®, the social media platform Facebook®, and the virtual meeting app Skype®.

Explore

Think about a skill or talent you have that could help others. Explain what it is. How might you use a video-sharing platform to provide information about it? Share your ideas with the class.

Review

1. Explain the positive impacts of ICT tools on Egyptian students' lives.
2. How can ICT tools help people of determination? Why are these tools so important?

Self-assess

Go to the Objectives at the beginning of the lesson.
Check the correct I can . . . box.

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BE THE EXPERT

YouTube is the world's best-known video-sharing platform. It was launched in 2005, after two of its founders found it too difficult to share a video they had taken at a dinner party. It's now the second most-visited site on the internet. A fun way to share your videos, YouTube has also been the source of controversy: Because anyone can post a video, there is a lot of illegal and immoral content on the platform. You should always have an adult helping you when watching or uploading to YouTube, and it can be a good idea to set your videos to 'private', so only your friends can see your creations.

TEACHING TIP

If you have an account with the Egyptian Knowledge Bank, take students on a tour of the website. Show them how to navigate the site and look up information of interest to them. As students name topics they want to know about, you can enter the information in the search bar and then show students how to follow links to the various articles, photos, and videos associated with that topic. Encourage students to use the website at home with their parents as well.

HOME-SCHOOL CONNECTION

Globalization issues: technological awareness

Send a note home with students telling family members about the Egyptian Knowledge Bank. Give the website (https://www.ekb.eg) and explain that they will need to set up an account before they can access content. In the coming days and weeks, invite students to share the things they have learned by visiting the site at home with their family members.

EXPLORE

AIM: To explore ideas and information that were introduced through the reading passage in **Learn**.

TIME: 7–10 minutes

- Follow the steps for **Routine 12: Time for a Discussion!**
  1. Tell students that the class will share their ideas as a way of reviewing the material that they just read.
  2. Read aloud the text in **Explore** and invite students to respond to the question. Provide feedback as the discussion progresses, helping to clarify ideas as necessary.
  3. When the discussion has concluded, ask students to share one thing from the discussion that they want to remember.

REVIEW

AIM: To check and consolidate the knowledge that students should have learned today.

TIME: 5–10 minutes

- Follow the steps for **Routine 15: Test a Partner.**

SELF-ASSESS

AIM: To help students complete a truthful self-assessment and find the assistance they need to further develop.

TIME: to be completed at home

- Follow the steps for **Routine 17: 3-2-1**

LESSON 3 pp. 20–21



COMPREHENSION

AIM: To see the benefits of ICT in our daily lives.

TIME: 5–7 minutes

1 Look and complete

1. Read aloud the directions. Then read aloud the first item in the chart: Communication with friends and family.
2. Ask students to think of an example of how ICT can help Egyptian citizens communicate with their friends and family. If necessary, make a suggestion, such as: People can communicate with each through apps such as WhatsApp®, Facebook®, and Skype®.
3. On the board, recreate the chart shown in the Student Book. Write down the example generated during your discussion, and have students copy it in their books.
4. Form pairs of students. Have partners work together in filling out the examples for Items 2 to 58.
5. Invite students to share their answers with the class. Use their responses to complete the chart on the board. (Suggested answers: **2. People can learn and share information through video-sharing platforms like YouTube®. 3. There are lots of gaming sites such as Animal Jam® and Club Penguin®. 4. Students can connect with each other through discussion boards and wikis that have been set up in connection with their various classes. 5. To support people of determination, we can do searches online and find organizations that need our help.**)

AIM: To discuss and give examples that illustrate the positive impacts of ICT.

TIME: 7–10 minutes

2 Read and write

1. Read the directions aloud and then form groups of three students.
2. Have groups work together in providing examples of how the Egyptian Knowledge Bank can help students develop skills associated with ICT.

Learn by doing **LESSON 3** Positive impacts of ICT

Comprehension

1 Look and complete

Complete the chart. Provide examples of how ICT can help citizens in the following areas.

Communication with friends and family	________
Learning / Sharing information	________
Entertainment	________
Education	________
Support for people of determination	________

2 Read and write

Explain how platforms like the Egyptian Knowledge Bank help students in the following areas:

- their experience with ICT tools
- skills development

____

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3. Reconvene the class. Use students' written responses as the basis for a discussion. Ask, for example: How does the EKB help students become better users of ICT? Field responses from the class and provide feedback as necessary. (Suggested answers: **There are lots of resources on EKB. All you have to do is start an account and then use the search tool to find things that interest you. Also, you can access lots of videos made by Education 2.0 through Youtube®. Just go to Youtube® and then do a search for Education 2.0.**) Ask How does using the EKB help develop your skills? (Suggested answers: **It helps build my research skills, such as finding information from multiple sources and narrowing my search terms to find specific information about a topic.**)

Critical Thinking

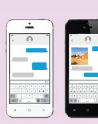
3 Think and answer

1. In what ways are these devices different?

desktop computer: ______________________



laptop computer: ______________________



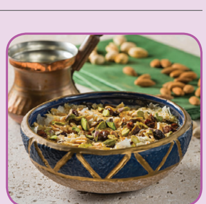
cell phone: ______________________

2. Write examples of situations where you might choose to communicate using the following apps, and explain why.
   WhatsApp® messenger: ______________________
   Facebook® community group: ______________________
   Skype® call: ______________________

Research

4 Write a summary

Learn how to make “Umm Ali”. Search online to find step-by-step instructions on how to make it. Write the steps below. Remember to choose reputable, safe platforms. Be sure to credit your source.



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CRITICAL THINKING

AIM: To compare and contrast different communication devices.

TIME: 5–7 minutes

3 Think and answer

1. Read aloud the directions, then help students get started by asking: How is a laptop computer different from a desktop computer? Have them write their answers in the spaces provided. Continue with the remaining items, providing feedback as necessary. (Suggested answers: **Desktop computers are the most powerful, but you can't move them around easily. Laptop computers are more portable and tend to have smaller screens. Cell phones are small and very portable. You can use them to make phone calls, send messages, and you can have lots of apps on them.**)
2. Complete the next activity in a similar way: read aloud the directions, discuss possible responses, and have students write their responses in their books. (Suggested answers: **WhatsApp® is good to use when you want to send and receive messages, whereas Facebook® might be better if you just want to make an announcement or post a photo. Skype® is useful when you want to actually talk with somebody in real time.**)

RESEARCH

AIM: To summarize an example from an app that is useful in everyday life.

TIME: 3–5 minutes

4 Write a summary

1. Read aloud the directions and tell students they are going to help you look up a recipe for Umm Ali.
2. From a computer connected to your smartboard, go to a search engine such as Google. (If a smartboard isn't available, you can have students gather around as you sit at a computer.)
3. Ask students to help you look up a recipe for Umm Ali. Try looking up a video on YouTube® if possible, as opposed to looking up written instructions.
4. After viewing the video, prompt students to help you summarize the steps involved: What do you need to make Umm Ali? What's the first step? and so on.
5. When you have summarized the steps orally, as a class, have students provide a written summary in the space provided. Remind them to give the source at the end of the recipe.

EXTENSION ACTIVITIES

1. Another great resource available on YouTube® is Discovery Education Egypt, which is affiliated with the Egyptian Knowledge Bank. Using a computer connected to a smartboard, you can browse the videos and playlists with students, helping to familiarize them with the site so that they can navigate it on their own.

LESSON 4 pp. 22–23

Internet communication

OBJECTIVES

- Discuss how to use the internet to communicate with friends and family, and other citizens.
- Explain the differences between synchronous and asynchronous communication.
- Determine the ICT tools needed to communicate via the internet.

LIFE SKILLS

- Learning to know: critical thinking
- Learning to live together: communication

VALUES

- Academic values: appreciation of technology

ISSUES AND CHALLENGES

- Globalization issues: civilizational communication

MATERIALS NEEDED

- Pencils and erasers, or highlighters (Learn)

LESSON 4 Internet communication

Objectives

By the end of the lesson, I will be able to:	After the lesson, check the correct box: **I can . . .**		
• Discuss how to use the internet to communicate with family and friends, and other citizens.	☐ Very well	☐ OK	☐ Need more work
• Explain the differences between synchronous and asynchronous communication.	☐ Very well	☐ OK	☐ Need more work
• Determine the ICT tools needed to communicate via the internet.	☐ Very well	☐ OK	☐ Need more work

Engage

How do you use the internet to communicate with family and friends? Do you always use the same tools to communicate?

Learn

You can use the internet to communicate synchronously and asynchronously.

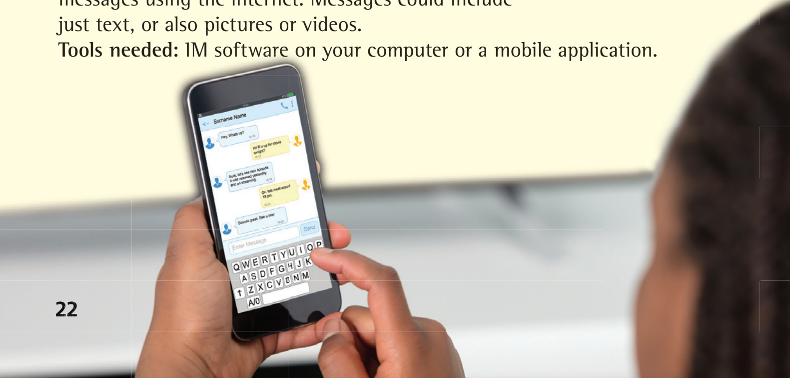
Synchronous communication: communication that occurs in real time, with instant responses – exchanging information or files between two people at the same time using various digital tools, for example: video chats, live television shows, instant chat rooms.

Asynchronous communication: communication that does not require an instant response – transferring information or files between two people or more not necessarily at the same time using various digital tools and resources, for example: sending a file via email, recorded educational programs.

Synchronous communication

Video chats: These allow you to communicate live with one or more people via your mobile device or computer.
Tools needed: Device with a camera and speakers, and an **application**, or video chat software.

Instant messaging (IM): This allows you to send messages using the internet. Messages could include just text, or also pictures or videos.
Tools needed: IM software on your computer or a mobile application.



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OBJECTIVES

AIM: Engage students' interest in the lesson objectives and content.

TIME: 2–3 minutes

- Follow the steps for **Routine I: Time to Explore!**
- Draw students' attention to the Lesson topic. Say *This lesson we're going to learn about different kinds of internet communication.*
- Read the objectives aloud to the class.
- Write on the board *Now's our chance to explore …* To ensure that students think in detail about the objectives, write more actions directly below *explore*, e.g.: *think about, learn about, study, discuss, look at, investigate, consider, plan.*
- Give students a minute to look at the lesson and assess what they'll explore.
- Elicit answers from individual students, e.g.; **Now's our chance to … learn about synchronous and asynchronous communication, look at instant messaging, talk about video chats, investigate message boards and email,** etc.).

ENGAGE

AIM: To help students achieve the Lesson Objectives by organizing ideas and information in a graphic organizer.

TIME: 5–7 minutes

1. In the middle of the board or on chart paper, draw a chart with two columns labeled *Different Forms of Communication on the Internet* and *How We Use Them*.
2. Ask the class to help you fill in the chart with their own ideas. Provide a few examples to help them get started.

Different Forms of Communication on the Internet	How We Use Them
Video chats	Talk to friends and family
Instant messaging	Send and receive messages
Chat rooms	Join online chats
Message boards	Leave messages for an online community
Email	Send longer messages

3. Tell students they will learn more about all these forms of communication in the next section.

LEARN

AIM: To take notes while reading to self-monitor comprehension.

TIME: 10–12 minutes

- Follow the steps for **Routine 8: Taking Notes.**

1. Say Taking notes while you read is a good way to make sure you are following the text. Look out for big ideas and words you don't understand. Use a pencil to draw a line under the most important words. Or you can circle them. Another way is to use a highlighter. If you don't understand something, look it up in a dictionary. You can also ask me if you need help. Then write the word's meaning in the margin.
2. Have students read the text and take notes as directed.
3. When they are finished, remind students that taking notes while reading is a good skill to develop, but before doing so, they should make sure it is OK to write in the material provided to them.

Cell phone application
A cell phone application is an application that runs on your mobile device. It allows you direct access to different programs such as email, instant messaging, social network pages, and video chats. Some applications could be pre-installed on your mobile device. Others need to be downloaded.

Chat rooms: These allow you to communicate in a group. They usually focus on just one particular subject. For example, people may use a chat room to maintain a discussion on a particular study subject.
Tools needed: web browsers for internet access or a mobile application e.g. Internet Explorer® or Google Chrome®.

Asynchronous communication

Email: This allows you to send and receive messages. Emails are a little more formal than IMs. For example, you could email your teacher about a school project. You could also use email to reach out to a government agency or an official.
Tools needed: internet browser to access an email website, or an email application on your mobile device.

Explore

Think about a community issue that you are passionate about. Provide an example of how you would use synchronous communication to share your thoughts on this issue with others. Then provide an example of how you would use asynchronous communication to deliver your message as well. Share your ideas with the class.

Review

1. In your opinion, what are the advantages of both synchronous and asynchronous communication?
2. What ICT tools do you enjoy using, or would you like to try in order to communicate? What tools do you enjoy the most?

Self-assess

Go to the Objectives at the beginning of the lesson.
Check the correct I can . . . box.

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BE THE EXPERT

The internet, also known as the World Wide Web, was originally restricted to non-commercial uses such as governmental and educational research, mainly within the United States. With the rise of the global internet, which started in the early 1990s, the internet has revolutionized communication. People around the world have since become accustomed to using a variety of different modes of communication, including email, phone calls, video conferences, blogs, and forums, etc. Currently, the number of internet users is estimated to be at least four billion, which represents more than half of the world's population.

TEACHING TIP

Consider starting a discussion board or wiki associated with your class. Doing so will help to foster a sense of community among your students, and it provides a forum for students to think outside the box and express their points of view. Your school may provide access to an online teaching application such as Blackboard®, which can help you get started. Otherwise, try doing an online search using the terms "discussion boards that do not require an account."

HOME-SCHOOL CONNECTION

Globalization issues: civilizational communication
Send a survey home with students asking family members to note which ICT tools, social media apps, and websites they use most often. This will help you to get a sense of students' experience and proficiency with online communication. It may also give you ideas for apps and tools that you can use in class.

EXPLORE

AIM: To explore ideas and information that were introduced through the reading passage in **Learn**.

TIME: 7–10 minutes

- This activity looks at the life skill of communication. Follow the steps for **Routine 12: Time for a Discussion!**
- When the discussion has concluded, ask students to talk about one thing from the discussion that they want to remember about the applications of synchronous and asynchronous communications.

REVIEW

AIM: To check and consolidate the knowledge that students should have learned today.

TIME: to be completed at home

- This activity looks at the life skill of critical thinking in examining the advantages and disadvantages of synchronous and asynchronous communication, as well as the ICT tools students most enjoy using and why. Follow the steps for **Routine 16: Family Test.**
- When students return to class, ask them to summarize the discussions that they had with their families. Guide them in making distinctions between different forms of internet communication.

SELF-ASSESS

AIM: To help students complete a truthful self-assessment and find the assistance they need to further develop; encourage critical thinking.

TIME: to be completed at home

- Follow the steps for **Routine 18: Promise!**
- When students are finished with their self-assessment, invite them to share with the class what they have learned and what they still want to learn.

LESSON 4 pp. 24–25



COMPREHENSION

AIM: To compare and contrast different modes of online communication.

TIME: 5–7 minutes

1 Look and complete

1. Read the directions with students. Remind them that *synchronous* means "at the same time" and *asynchronous* means "at different times."
2. Form pairs or small groups of students. Have them sort the terms, putting each one in the correct column.
3. Recreate the chart on the board. Ask students to help you fill it out. (Answers: **Synchronous communication: instant messaging, video chat; Asynchronous communication: chat room, email,**)

AIM: To discuss and give examples of synchronous and asynchronous communication.

TIME: 7–10 minutes

2 Look and write

1. Read the directions aloud and then form groups of three students.
2. Have groups work together in providing examples of how they might use each form of communication. Tell students to take notes in the spaces provided as they discuss each item.
3. Reconvene the class. Use students' written responses as the basis for a discussion. Ask, for example: Have you ever used a chat room? When and how did you use it? Continue in this way, asking students to talk about their use of online ICT tools.

Learn by doing **LESSON 4** Internet communication

Comprehension

1 Look and complete

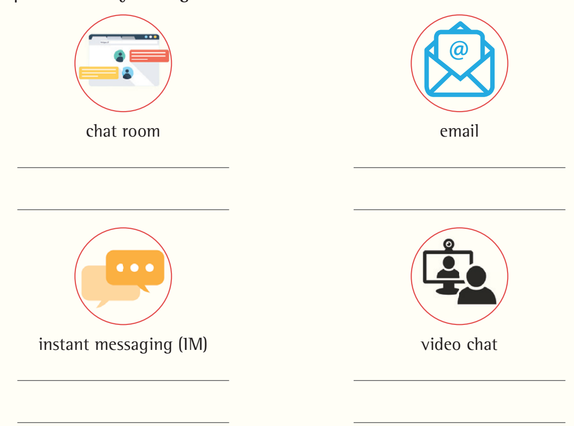
Complete the chart. Put the different forms of internet communication in the correct column.

chat room email
instant messaging (IM) video chat

Synchronous communication	Asynchronous communication
______________	______________
______________	______________
______________	______________

2 Look and write

Look at the chart in Exercise 1. How can each form of communication help you to communicate your views, ideas, and feelings to others? Provide an example of when you might use each one to do so.



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(Suggested answers: **In a chat room, you can talk to friends and family. You have to type on a keyboard, but it's like a conversation. With email, you can send longer messages. The other person can respond when it's convenient. Instant messages are online chats, with messages typed out on a keyboard. But unlike a chat room, it's just between you and one other person, or a group of people that you've invited. With video chats, you can have a real-time conversation with one person or even a whole group of people.**)

Critical Thinking

3 Think and answer

What is the digital equivalent to each of the following scenarios? Choose from the forms of internet communication you've learned in this lesson. Explain your choices. (Note: There may be more than one suitable form to choose from.)

getting immediate help: ______________________________

formally reporting a crime: ______________________________

helping a neighbor with a household chore or job:

____

finding a lost pet: ______________________________

comforting someone: ______________________________

ICT and Me

4 Think and answer

1. What is your favorite computer or mobile application? Why?

____

2. How have you used, or how would you use, each form of internet communication in this lesson?

____

25

CRITICAL THINKING

AIM: To think about and discuss the applications of internet communication in daily life.

TIME: 5–7 minutes

3 Think and answer

1. Read aloud the directions, then form groups of three students and have them work together in noting the digital form of communication that is suited to each situation. Remind them that more than one answer will often be possible.
2. When students are finished, invite groups to share their ideas with the class. (Suggested answers: **In an emergency, use your phone for help. For ambulance services, dial 123, for police 122, and for the fire department 180, Formally reporting a crime: Call your local police department. You can look up the phone number by doing an online search, Helping a neighbor with a household chore or job: Contact your neighbor through instant messaging if possible, and ask if he or she needs any help, Finding a lost pet: Post a message on a local discussion board, Comforting someone: Send an email and express your support.**)

ICT AND ME

AIM: To evaluate different forms of internet communication.

TIME: 5–7 minutes

4 Think and answer

1. Read aloud the directions and tell students to work independently in writing their responses to each question. Circulate and provide help with spelling and sentence formation as necessary.
2. When they are finished, invite students to read their responses aloud for the class. You might share about your own preferences and experiences with ICT as well. (Responses will vary.)

EXTENSION ACTIVITIES

1. Have a discussion with students about the risks associated with the different forms of communication in this lesson. Remind them that chat rooms, forums, blogs, and discussion groups are open to the public. If they participate in one of these forms of ICT, they will therefore come into contact with people they don't know. It can be fun to interact with people in this way and make new friends, but remind students that they should never share private information (full name, age, address, contact information) with total strangers. If they are ever confused about how to deal with a situation that has come up in one of these forums, they should talk to their parents immediately.

LESSON 5 pp. 26–27

How to use e-communication

OBJECTIVES

- Discuss e-communication etiquette.
- Explain how to use e-communication.
- Use some digital tools to communicate with others.

LIFE SKILLS

- Learning to live together: empathy
- Learning to do: cooperation

VALUES

- Co-existence values: respect

ISSUES AND CHALLENGES

- Globalization issues: civilizational communication

MATERIALS NEEDED

- Whiteboard and markers (Learn)
- Drawing paper, pencils, crayons, or markers (Teaching Tip, Comprehension, Extension Activities)

LESSON 5 How to use e-communication

Objectives

By the end of the lesson, I will be able to:	After the lesson, check the correct box: **I can . . .**		
• Discuss e-communication etiquette.	Very well	OK	Need more work
• Explain how to use e-communication.	Very well	OK	Need more work
• Use some digital tools to communicate with others.	Very well	OK	Need more work

Engage

How do you show proper etiquette when communicating online?

Learn

How to use ICT tools to communicate

MAKING VIDEO CHATS

To start a call, you create a link to send to the participant(s). If you're joining a call, you click on a link and wait to be "let in" by the person who initiated it. Or you answer the call by clicking on the phone/video icon.

Make sure your microphone and camera are on. Sometimes, the person in charge of the call may mute people's microphones. You can also mute your microphone or turn off your camera at any time.

If your camera is on, anyone who is on the call will be able to see you. Be properly dressed and behave as if you were out in public. Take your turn when speaking. Make sure there is nothing in your background that indicates your address or any personal information that you do not want to share.

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OBJECTIVES

AIM: To ensure that students understand the objectives of the lesson.

TIME: 2–3 minutes

- Follow the steps for **Routine 3: Understanding Objectives.**
- Explain or review any terms as necessary. Some students, for example, may need to review the term *etiquette*, which was introduced in Lesson 2. Remind students that etiquette refers to rules having to do with politeness and good manners.

ENGAGE

AIM: To enable students to participate confidently and collaboratively in a class discussion that leads to the objectives of the lesson.

TIME: 2–5 minutes

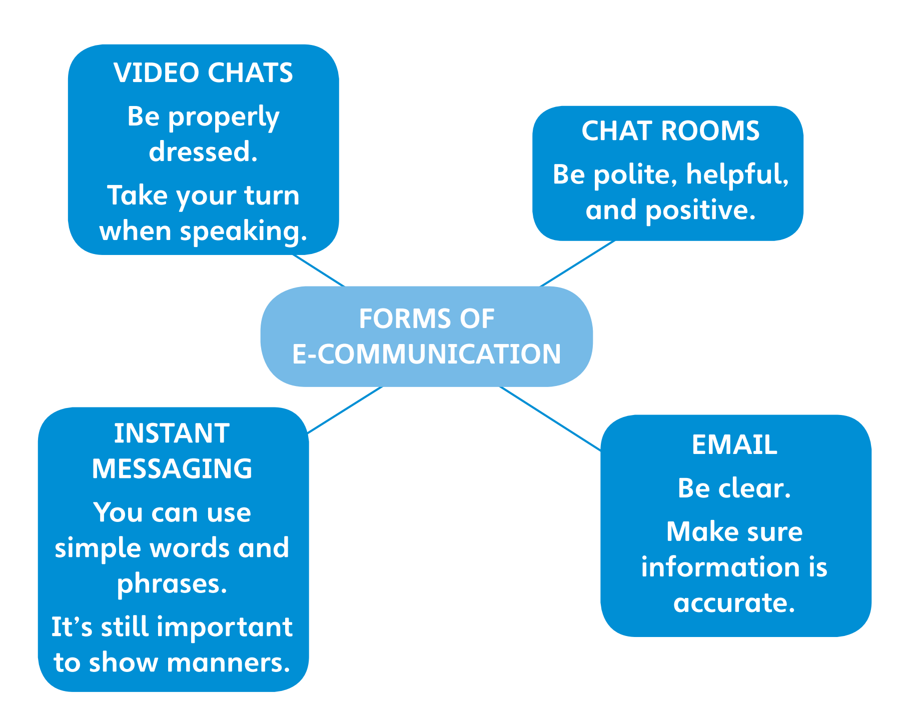
- Follow the steps for **Routine 4: Think-Pair-Share.**
- After pairs discuss the **Engage** question, invite them to summarize their discussion for the class. Ask follow-up questions, such as Can you think of a time when you followed etiquette online? Describe what happened.

LEARN

AIM: To help students achieve the lesson objectives by organizing the new information they have learned.

TIME: 10–15 minutes

- Follow the steps for **Routine 9: Mind-Mapping.**
  1. Draw students' attention to **Learn**. Read the heading and the lesson objectives.
  2. Draw a big box in the center of the board and label it: *Forms of E-communication.*
  3. Have students read the information in **Learn**. Pause at useful points in the text and add to the information in the mind map on the board. Help students think of useful tips to keep in mind when using each mode of communication. See below for an example.



Teaching support for an integrated classroom					
Intellectual disability and slow learning	**Autism**	**Hearing impairment**	**Learning disability**	**Motor disability and cerebral palsy**	**Blind and weak sighted**
- Writing the vocabularies (synchronous communication, asynchronous communication, instant messaging, video chats, cell phone application, chat rooms, web browsers, email) on the board or highlighting them in the Student's Book. - Using visual flowcharts based on the continuity and sequence of the practical procedural steps of using video chats, chat rooms, instant messaging, email.					Describing the diagram about how to follow the steps for video chats, chat rooms, instant messaging, email.

CHAT ROOMS

In a chat room, you can simply type and submit your comment. You can reply to messages too. Some participants may reply to your message. Remember, anyone who has access to the chat room will be able to read your messages. Be polite, helpful, and positive.

INSTANT MESSAGING

Click on the name of the person you'd like to chat with. Type your message and click the "Send" icon. Instant messaging is a fun, casual way to communicate. You may use phrases instead of full sentences, emoticons, or even images to communicate, but it's still important to show manners.

EMAIL

It's common to use emails in more formal situations – such as creating an EKB account and writing to your teacher. To send an email to someone, type their email address in the "To:" field. Provide clear subject information in the subject line.
When writing an email, be sure to use proper grammar. Be polite and clear. Use greetings and endings. If you're sending attachments, be sure the information you're sending is safe and accurate.

Explore

Review your response to the Explore question in Lesson 4. Write an email to your teacher to discuss the community issue you're passionate about. Explain to your teacher why the issue means a lot to you.

Review

1. Explain important factors to consider when using each type of ICT tool above.
2. Why do you think proper etiquette is an important part of communicating successfully online?

Self-assess

Go to the Objectives at the beginning of the lesson.
Check the correct I can . . . box.

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BE THE EXPERT

The use of video chats, also known as video conferencing, skyrocketed during the COVID-19 pandemic, which started in the spring of 2020. For many people, the initial motivation for using video chats was to protect their health and maintain social distancing. Since then, other benefits have also become apparent. Many users say, for example, that video conferencing boosts productivity, saves time, and reduces travel expenses. There are now a wide variety of different applications to choose from, including Zoom®, Microsoft Teams®, and Google Meet®.

TEACHING TIP

Consider starting a paper-based "email system" in your classroom. Provide students with a template showing the basic elements of an email (*To*, *From*, *Subject*). Allow them to write "emails" to classmates during breaks and then distribute the messages to their intended recipients, who can then respond with emails of their own.

HOME-SCHOOL CONNECTION

Life skill: Learning to be: empathy

Ask students to talk with family members about the importance of good manners. Ask How do you show good manners at home with your parents and other family members? Afterwards, you can invite students to summarize the discussions that they had with their families.

EXPLORE

AIM: To think and write about a community issue of interest to students.

TIME: 10–12 minutes

1. Help students review their responses to the **Explore** question in Lesson 4. Summarize the main points of the discussion and then prompt students to think about a community issue of importance to them.
2. Distribute writing paper. Tell students to imagine that they are going to send you an email. Have them write "To [Your name]" "From [Student's name]" and "Subject" at the top. Tell them to add a few words to the subject line that identify the issue that they want to write about.
3. Give students time to write their email. Encourage them to explain why the issue means a lot to them.
4. Circulate and provide help with spelling as necessary.
5. When students are finished, collect their writing. If time allows, write a response to students' emails (at the bottom of the paper or on the back).

REVIEW

AIM: To check and consolidate the knowledge that students should have learned today.

TIME: 5–10 minutes

- This activity relates to the life skill of empathy. Follow the steps for **Routine 15: Test a Partner.**
- When partners are finished with their discussion, invite volunteers to share why they think that proper etiquette is an important part of online communication. Use this opportunity to reinforce the idea that etiquette is a form of empathy. Explain: Empathy is when you imagine how another person feels. Imagining how others feel naturally makes you want to treat them with respect, and proper etiquette is one way of doing that.

SELF-ASSESS

AIM: To help students complete a truthful self-assessment and find the assistance they need to further develop; to encourage critical thinking.

Time: to be completed at home

- Follow the steps for **Routine 17: 3-2-1**
- When students are finished with their self-assessment, clarify any questions that they may still have about the objectives.

LESSON 5 pp. 28–29



COMPREHENSION

AIM: To practice creating written messages while using proper etiquette.

TIME: 5–7 minutes

1 Look and write

1. Read the directions and then the prompt. To help students think of a way to be more inclusive, suggest that they start with the word *and* instead of the word *but*: When you start with the word *but*, you are showing a contrast between your opinion and the other person's opinion. If you start with the word *and*, you are adding to what the other person has said. Invite volunteers to share their ideas with the class. (Suggested answer: **And we can also include snacks like popcorn and pieces of fruit.**)
2. Read the prompt and then give students some general guidelines on how to graciously turn down an invitation: It's good to start off by thanking the other person for thinking about you. If you're too tired or there's some other reason that you can't accept, briefly explain why and then suggest that you get together some other time. Invite volunteers to share their ideas for turning down the invitation. (Suggested answer: **Thanks for inviting me. That is very nice of you. I'm feeling tired today though, and I have a lot of homework to do. How about Friday? I'm free all day.**) Have students write their responses in the space provided.

ROLE PLAY

AIM: To practice online etiquette by role-playing a video chat with a partner.

TIME: 7–10 minutes

2 Participate in a video chat

1. Read the directions aloud and then tell students that they will role-play two people having a video chat.
2. Form pairs of students. Have students choose one of the topics and discuss it together for 2 to 3 minutes. Remind them to sit facing each other.
3. When they are finished, have students switch partners and practice having a discussion about a different topic.

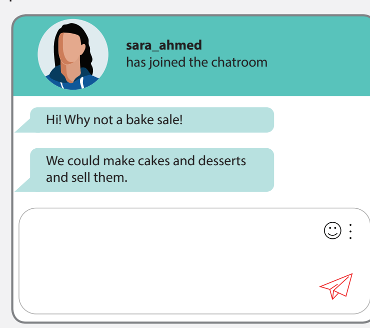
Learn by doing **LESSON 5** How to use e-communication

Comprehension

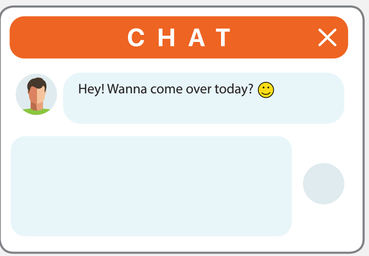
1 Look and write

Read and write responses. Be sure to consider the form of communication being used and to use proper etiquette.

1. You are part of a class chatroom. Your teacher has asked you and your classmates to come up with ideas for a medical fundraiser. Sara shares a suggestion: have a bake sale, with delicious cookies and cakes. You'd prefer a fundraiser that doesn't include unhealthy foods. Post your comment. Be sure to include your username.



2. One of your friends sends you an IM inviting you to come over. You're too tired, and you have a lot of homework to do. Send your friend a response.



Role Play

2 Participate in a video chat

Work with two classmates. Pretend you're on your mobile device or computer, and that you're having a video chat with them. Remember to take turns speaking.

Discuss one of the following topics:

- Your favorite sports team
- Your favorite tv program
- Your favorite foods
- A community or school issue that means a lot to you

28

AIM: To think about and discuss personal communication styles.

TIME: 3–5 minutes

3 Think and discuss

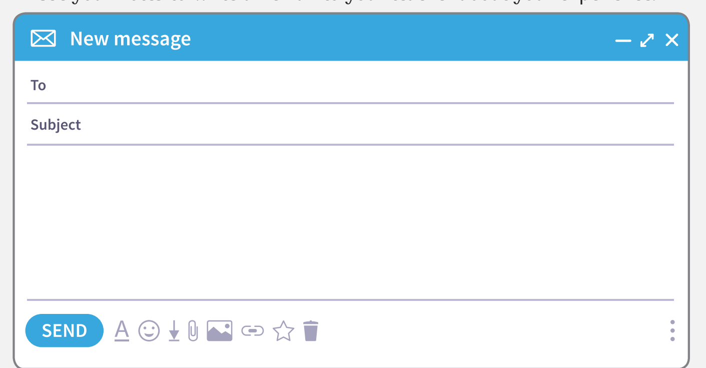
1. Read aloud the directions and have partners talk about their participation in the role plays. Say Describe what you did well and what you would do differently next time.
2. Give students a few moments to share their ideas and experiences with each other.

3 Think and discuss

After your role play, explain what you feel your strengths were during the chat. Then explain what you felt you could have done better. How could you improve next time?

4 Write an email

Use your notes to write an email to your teacher about your experience.



ICT and Me

5 Think and answer

Which of the following topics would you feel comfortable posting about online? Are there any you would not feel comfortable posting about? Explain why. (Add your own choices.)

- Your concerns about the community
- Your concerns about the school
- Your achievements
- Your family/friends
- Sports
- Entertainment
- Food

29

AIM: To practice putting thoughts and ideas in written form.

TIME: 3–5 minutes

4 Write an email

1. Read aloud the directions and have students write an "email" to you in the space provided. Say Tell me how the role play went for you. What did you like about it? What did you learn?
2. Give students a few moments to write their emails. Remind them to press "Send" when they are finished!

ICT AND ME

AIM: To evaluate the relevance and interest of different discussion topics to online communication.

TIME: 5–7 minutes

5 Think and answer

1. Read aloud the directions and tell students to work independently in writing their responses. Tell them to choose at least one topic they would feel comfortable posting about on an online message board, and one topic they would not feel comfortable posting about. Remind them that they can choose their own topics.
2. When they are finished, invite students to read their responses aloud for the class. You might share your own preferences as well. (Responses will vary.)

EXTENSION ACTIVITIES

1. Pose hypothetical questions to students that involve matters of etiquette, and ask them how they would respond. You might say, for example: Imagine that you can't eat sugar or drink milk because of allergies. But then your friend sends you an instant message asking if you'd like to go out for ice cream. How would you respond? Tell students there isn't one correct way of responding. The important thing is to be polite and show consideration for the other person's feelings.
2. Distribute drawing paper and crayons, pencils, or markers. Encourage students to create short comic strips showing two different scenarios involving e-communication: one in which a person is rude and inconsiderate, and then another one in which the person is kind and polite. Post the comic strips on the wall so that students can view each other's work.

LESSON 6 pp. 30–31

Online learning environments and sources

OBJECTIVES
- Explain the purpose of online learning environments.
- Discuss online learning sources.
- Explore questions with links to other school subjects.

LIFE SKILLS
- Learning to do: negotiating
- Learning to know: problem solving

VALUES
- Work values: perseverance

ISSUES AND CHALLENGES
- Globalization issues: digital citizenship

MATERIALS NEEDED
- Notebooks or writing paper (Explore, Self-Assess)
- Pens or pencils (Explore, Self-Assess)
- OPTIONAL Computer connected to smartboard (Comprehension)

LESSON 6 Online learning environments and sources

Objectives

By the end of the lesson, I will be able to:	After the lesson, check the correct box: **I can . . .**		
• Explain the purpose of online learning environments.	Very well	OK	Need more work
• Discuss online learning sources.	Very well	OK	Need more work
• Explore questions with links to other school subjects.	Very well	OK	Need more work

Engage

How have online learning tools helped you to learn about a particular subject?

Learn

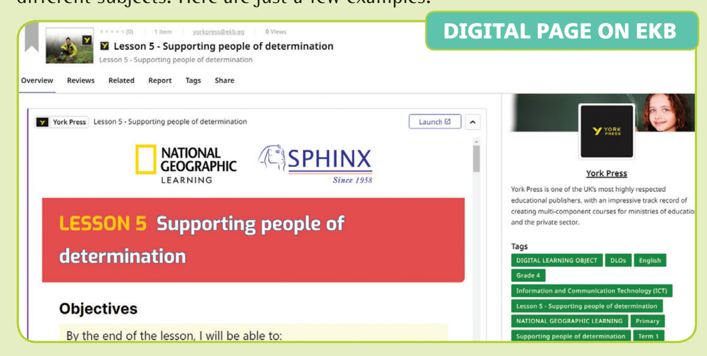
Online learning environments

Online learning environments, like **Edmodo®**, allow teachers and students to communicate, no matter where they are. Teachers can provide virtual lessons and upload quizzes and homework assignments for students to access. Students can also send messages to their teachers, and post their completed assignments.

Online learning sources

There are multiple online learning sources that can help you to learn about different subjects. Here are just a few examples:

DIGITAL PAGE ON EKB



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OBJECTIVES

AIM: Encourage students to take responsibility for their own learning needs and paths.

TIME: 2–3 minutes

- This activity looks at the work value of perseverance. Follow the steps for **Routine 2: What Do I Need to Do?**
- Encourage students to keep track of their progress throughout the lesson. Remind them that they will have the opportunity to evaluate how well they have accomplished the objectives when they do the **Self-assess** activity.

ENGAGE

AIM: To enable students to participate confidently and collaboratively in a class discussion that leads to the objectives of the lesson.

TIME: 2–5 minutes

- Follow the steps for **Routine 4: Think-Pair-Share.**
- After pairs discuss the **Engage** question, invite them to summarize their discussion for the class. Ask follow-up questions, such as Can you think of a time when an online tool helped you learn about a particular subject? Describe what happened.

LEARN

AIM: To motivate students to read a long text; to enable students to achieve the lesson objectives.

TIME: 15–20 minutes

- Follow the steps for **Routine 7: K-W-L Chart.**
  1. Draw a chart with three columns on the board. Label the columns: K, W, L.
  2. Say Copy the chart into your notebook or on a piece of paper.
  3. Say K means: What do you Know about this topic? W means: What do you Want to know about the topic? L means: What have you Learned about the topic? Before we read, we're going to complete columns K and W. After we read, we're going to complete column L.
  4. Have students sit shoulder-to-shoulder.
  5. Ask What do you Know about online learning environments like Edmodo® and the EKB? Share ideas and note them in column K.
  6. Ask What do you Want to know about these and other online learning environments? Share ideas and write them in column W.
  7. After students have read the text, ask What did you Learn about online learning environments? Share ideas and write them in column L.

EGYPTIAN KNOWLEDGE BANK

This is Egypt's premiere online library of resources for a variety of subjects. It allows you to research and examine different topics, digital articles, and videos just by clicking on them.

VLABY

A virtual labs platform that enables students and teachers to do lab experiments in an interactive environment. It's not only informative, but fun too!

NATIONAL GEOGRAPHIC KIDS

A popular online source for kids to find information on a variety of subjects, from animals and science, to history and even geography.

MAPMAKER INTERACTIVE

A special interactive feature delivered by National Geographic, Mapmaker Interactive provides online world mapping tools for students and teachers. Map themes, data, and tools are used.

Reliable online digital tools are invaluable sources of information. The Mapmaker Interactive is one of the safest sites for research and data collection.

Explore

Come up with questions about a subject that you would like to research. Some possible subjects/topics to consider:

- Social Studies: Ancient Egypt
- Career Skills: Digital skills needed for different professions
- Science: An important scientific discovery

Write your questions in your notebook. Then, with a partner, discuss online learning sources that may help you in your research.

Review

1. Discuss the purpose of online learning environments.
2. Have you used any of the online learning sources discussed in this lesson? Explain which one(s), and how you used them. Which online learning source interests you the most? Why?

Self-assess

Go to the Objectives at the beginning of the lesson.
Check the correct I can . . . box.

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BE THE EXPERT

Your students are likely to be proficient users of YouTube®, as it is one of the most popular websites in the world. In addition to countless videos intended for entertainment, it also has many educational "channels." Users may upload videos they have made for an intended audience. The channel has its own web address (URL), and visitors can subscribe to the channel for easy access. Many educators around the world have taken advantage of this feature and started their own channels to give lessons inside and outside of the classroom. If you are interested in starting your own channel, go to youtube.com and enter "How to start your own youtube channel" in the search bar.

TEACHING TIP

Tell students that you are going to demonstrate how to conduct research online. Choose a topic that students mentioned during **Explore**, then investigate this topic by visiting one or more of the learning environments that were covered in the lesson. Model how to find information by entering key words in the search bar. When you are finished, tell students they will use these skills when they do their own research in Lesson 7.

HOME-SCHOOL CONNECTION

Globalization issues: digital citizenship

Send the list below home with students. Inform parents that these sites are free of charge and are safe to visit. Encourage them to visit these sites with students to take advantage of the excellent content: Edmodo: https://new.edmodo.com, EKB: https://www.ekb.eg, National Geographic Kids: https://kids.nationalgeographic.com, Mapmaker Interactive: https://mapmaker.nationalgeographic.org.

EXPLORE

AIM: To enable students to work quickly, creatively, and collaboratively to generate ideas; to lead an activity based on their ideas to meet the objectives.

TIME: 10 minutes

- This activity involves the skill of problem solving. Follow the steps for **Routine 13: Brainstorm.**
- When students are finished with their brainstorm, invite them to share the questions that they generated, and the learning sources that they think could help in their research.
- Provide feedback and offer suggestions as appropriate.
- Remind students to save their notes, as they will be using them to conduct a research project in Lessons 7 and 8.

• REVIEW

AIM: To check and consolidate the knowledge that students should have learned today.

TIME: to be completed at home

- This activity looks at the life skill of negotiating. Follow the steps for **Routine 16: Family Test.**
- Invite students to share why they think that considering their purpose for using a particular source can save time when conducting research online.

SELF-ASSESS

AIM: To help students complete a truthful self-assessment and find the assistance they need to further develop; to encourage critical thinking.

TIME: to be completed at home

- Follow the steps for **Routine 18: Promise!**
- Have students save their written promises in a safe place, and remind them later to check and see the progress they have made in achieving the objectives.

<table>
<tr><th colspan="6">Teaching support for an integrated classroom</th></tr>
<tr><th>Intellectual disability and slow learning</th><th>Autism</th><th>Hearing impairment</th><th>Learning disability</th><th>Motor disability and cerebral palsy</th><th>Blind and weak sighted</th></tr>
<tr><td colspan="3">- Writing the vocabularies (online learning environments, online learning sources) on the board or highlighting them in the Student's Book.
- Determining examples for online learning sources (EKB, Vlaby, National Geographic Kids, Mapmaker Interactive) in the Student's Book and writing them on the board.</td><td></td><td></td><td>- Active participation of the blind.
- Using the screen reader to display online learning sources.</td></tr>
</table>

LESSON 6 pp. 32–33



COMPREHENSION

AIM: To share personal experiences having to do with online learning environments.

TIME: 3–5 minutes

1 Think and answer

1. Read the question aloud and give students a few minutes to write their response in the space provided.
2. Invite students to share what they have written with the class. Encourage them to elaborate on their responses by asking questions such as: What features of this (website, platform, app) make it unique? Would you recommend it to a friend? Why?

AIM: To match various resources to particular tasks and projects.

TIME: 7–10 minutes

2 Look and write

1. Read the directions aloud and then form pairs or small groups of students.
2. Have groups work together in completing the chart.
3. When groups are finished, help them check their answers by providing an answer key on the board. (*Egyptian Knowledge Bank: learn how to make a delicious koshari meal; read about the Egyptian pyramids, Vlaby: work on a science experiment; complete a lab activity, National Geographic Kids: study climate issues for different countries, Mapmaker Interactive: study the landscape of Egypt.*) Note: Other answers are possible. The important thing is that students are able to provide a rationale for why they chose a particular resource.

Learn by doing

LESSON 6 Online learning environments and sources

Comprehension

1 Think and answer

If you've been a student in an online learning environment, what did you like about it?

______

______

______

______

2 Look and write

Complete the chart. Look at the online learning sources. Choose which source you would use to do the following:

work on a science experiment study the landscape of Egypt
read about the Egyptian pyramids
learn how to make a delicious koshari meal
study climate issues for different countries complete a lab activity

Source	
Egyptian Knowledge Bank	
Vlaby	
National Geographic Kids	
Mapmaker Interactive	

Compare your answers with your classmates. If you have different responses, explain why you think your response is best.

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Cross-Curricular Connections

3 Think and write

In Lessons 7 and 8, you will conduct a multimedia content search and present your findings using online tools. Look at the questions you chose in the Explore section on page 31, and think about the online sources you discussed with a partner. Write your notes to prepare.

Subject chosen: ______________________________

Why I chose this subject:

____

____

____

Questions I have:

____

____

____

Online learning sources that I will use:

____

____

____

Why I chose the above online sources:

____

____

____

ICT and Me

4 Think and answer

In Term 1, Unit 1, you learned how to collect information and to present your findings using ICT tools. In Term 1, Unit 2, you learned how to conduct a digital search. How did this help you during your multimedia content search?

____

____

____

____

____

____

____

33

CROSS-CURRICULAR CONNECTIONS

AIM: To prepare for the research project.

TIME: 10–12 minutes

3 Think and write

1. Read aloud the directions and explain that students will complete this activity independently.
2. Give students time to take notes in the spaces provided. Circulate as students work, providing help as necessary.
3. Remind students they will use these notes to conduct a research project in Lessons 7 and 8.

ICT AND ME

AIM: To review important points to take into consideration when preparing for a research project.

TIME: 3–5 minutes

4 Think and answer

1. Read aloud the directions and have students write their responses in the space provided.
2. When students are finished, invite them to share their responses with the class. Use their ideas as a way of discussing how to prepare for a research project. Possible topics include using guiding question; refining search terms, taking notes, etc.

EXTENSION ACTIVITIES

1. To help students prepare for their research project, it may be useful to show them an example or model of a presentation that embodies the expectations or requirements for this assignment. You might be able to find an example of a student presentation on YouTube® or some other platform. Alternatively, you could prepare a presentation of your own, modeling for students such requirements as: length of time, number of slides, the use of visuals, etc.
2. Take students on a tour of the school library or resource center, which may provide materials and resources that students can use for their research project. Ask the librarian to show students how they can locate materials related to their research.

LESSON 7 pp. 34–35

Planning digital searches

OBJECTIVES

- Discuss reliable and unreliable online sources.
- Explain how to plan and conduct a digital search.
- Discuss how to gather and present information using online sources.

LIFE SKILLS

- Learning to do: productivity
- Learning to know: creativity

VALUES

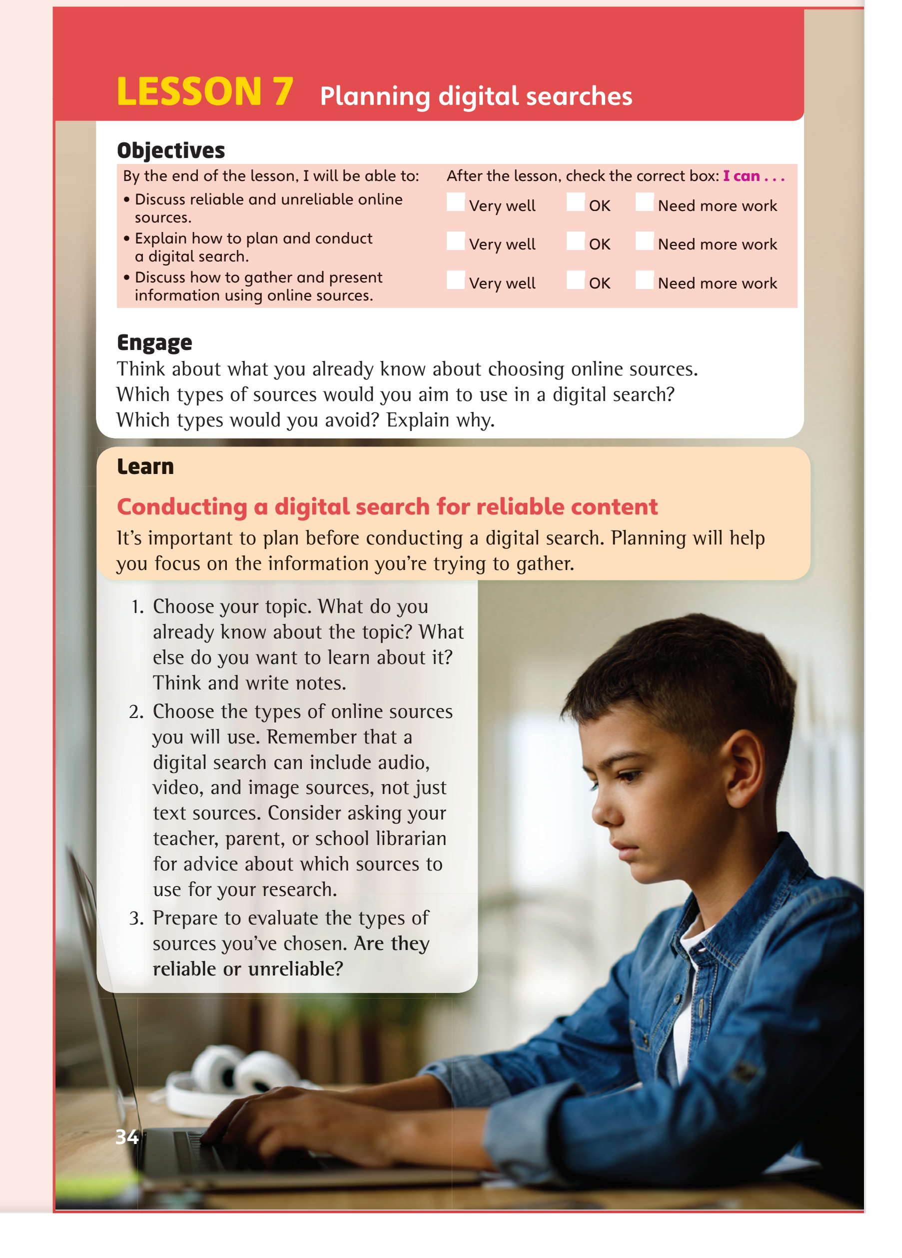
- Personal values: independence
- Academic values: objectivity, curiosity, and honesty

ISSUES AND CHALLENGES

- Citizenship issues: participation in scholarly research

MATERIALS NEEDED

- Classroom computers or tablets (Explore, Research)
- Classroom printer (Research)
- Pens, pencils, and writing paper (Explore, Research)
- Poster paper, markers (Teaching Tip)



LESSON 7 Planning digital searches

Objectives

By the end of the lesson, I will be able to:	After the lesson, check the correct box: I can . . .		
• Discuss reliable and unreliable online sources.	Very well	OK	Need more work
• Explain how to plan and conduct a digital search.	Very well	OK	Need more work
• Discuss how to gather and present information using online sources.	Very well	OK	Need more work

Engage

Think about what you already know about choosing online sources. Which types of sources would you aim to use in a digital search? Which types would you avoid? Explain why.

Learn

Conducting a digital search for reliable content

It's important to plan before conducting a digital search. Planning will help you focus on the information you're trying to gather.

1. Choose your topic. What do you already know about the topic? What else do you want to learn about it? Think and write notes.
2. Choose the types of online sources you will use. Remember that a digital search can include audio, video, and image sources, not just text sources. Consider asking your teacher, parent, or school librarian for advice about which sources to use for your research.
3. Prepare to evaluate the types of sources you've chosen. Are they reliable or unreliable?

34

OBJECTIVES

AIM: To ensure that students understand the objectives of the lesson.

TIME: 2–3 minutes

- Follow the steps for **Routine 3: Understanding Objectives.**
- Explain any unfamiliar terms or vocabulary. Some students, for example, may be unfamiliar with the words *reliable* and *unreliable*: Explain: The word reliable refers to something that you can trust or depend on. When talking about research projects, it refers to sources of information that are consistently accurate and high quality. The word unreliable is the exact opposite. It refers to sources that often contain false or inaccurate information.

ENGAGE

AIM: To engage students in a discussion that leads to a lesson objective or life skill; to use critical thinking to investigate clues in photos.

TIME: 3–5 minutes

- This activity promotes the academic values of objectivity and curiosity. Follow the steps for **Routine 5: Photo Detectives!**
- After pairs have discussed the photo, ask follow-up questions, such as What do you think the boy is doing? Yes, he must be doing a research project because he looks interested in what he's doing. What do you think he might be typing? (Possible answers: the url of a website he wants to use; search terms for his topic.)
- Read the **Engage** questions again. Use the questions to lead a discussion about the types of websites that are good for academic research.
- Tell students they will get further clues on how to evaluate websites when they read the article in the next section.

• LEARN

AIM: To enable students to read text in a way that maintains interest.

TIME: 15–20 minutes

- Follow the steps for **Routine 10: Popcorn Reading.**
- Use this routine to have students read aloud manageable chunks of text. One student can read the introduction, for example, while others can read each of the numbered items, and so on.

<table>
<tr><th colspan="6">Teaching support for an integrated classroom</th></tr>
<tr><th>Intellectual disability and slow learning</th><th>Autism</th><th>Hearing impairment</th><th>Learning disability</th><th>Motor disability and cerebral palsy</th><th>Blind and weak sighted</th></tr>
<tr><td colspan="5">- Highlighting the vocabularies (reliable sources, unreliable sources, digital search).
- Using visual flowcharts based on the continuity and sequence of the practical procedural steps of making a digital search plan and getting reliable content through simple specific components.
- Using demonstration to clarify the procedural steps of making a digital search plan.</td><td>- Describing the steps of a digital search plan orally for the blind.
- Using demonstration to clarify the procedural steps of making a digital search plan, and using the screen reader to do so.</td></tr>
</table>

While conducting your digital content search, be sure to stay focused on the topic you're researching. Once you find information that seems to answer your questions, evaluate it. Is it reliable?

Once you've determined that the information is reliable, take thorough notes. Be sure to write down what you're going to use from the source material. Don't forget to cite the source information in your notes. You will need to credit the source in your report.

Unreliable sources:
You may find factual information on social media sites, such as Facebook®, Wiki pages, and blogs. However, you are also likely to find information full of opinions, errors, and even lies. You must be wary of information you find on these types of sources.

Reliable sources:
Reliable sources are articles or information written and verified by experts. The information is presented in a professional fashion. The source information is well-written, without grammar or spelling mistakes.

Organizing and writing your report

After you've completed your online search, gather your notes and reliable source information.

Use your notes to write an **outline**. This will help you present the information in your report in a logical way.

Writing an outline
An outline should include:
- An introduction that introduces the topic of the report
- Supporting paragraphs that present the information
- A conclusion or final thoughts on the information that you have presented

Explore
Conduct a digital search to get answers to your questions from the Explore section in Lesson 6. Take notes while you conduct your search.

Review
1. Provide an example of a reliable digital source. Explain why it's reliable. Provide an example of an unreliable digital source. Explain why it's unreliable.
2. Discuss how you planned and performed your digital search.

Self-assess
Go to the Objectives at the beginning of the lesson.
Check the correct I can . . . box.

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BE THE EXPERT

- Many search engines ignore words like *the*, *and*, *how*, *where*, etc., so when you enter text in a search bar, you only need to type in the key words of the phrase you're looking for (usually nouns).
- If you are looking for a particular phrase, put the phrase inside quotation marks.

TEACHING TIP

Have students help you create a poster summarizing the differences between reliable and unreliable sources of information. On a large sheet of poster paper, create two columns labeled *Reliable Sources* and *Unreliable Sources*. Tell students to summarize the tips on page 35 and then note their responses in the appropriate column. (Suggested Answers: **Reliable sources: Up to date, have .eg, .org, or .edu in the web address. Unreliable Sources: Aren't up to date, have a lot of ads or commercials**).

HOME-SCHOOL CONNECTION

Citizenship values: participation in scholarly research

Send a note home with students explaining to parents that their child is preparing for a report. Encourage parents to ask their children about their reports and how they plan on presenting their findings. Talking with parents and other family members about their reports in this way will help students to clarify their ideas.

EXPLORE

AIM: To enable students to work productively and creatively on their own research projects.

TIME: 20–30 minutes

- Tell students that they will conduct a digital search to get information related to the questions that they generated in the **Explore** section of Lesson 6.
- Give students a few minutes to look at their questions and to think of search terms that will help them locate relevant information. Help them create a list of terms that they think will be useful.
- Have students take turns looking up information for their research project on a classroom computer or tablet. Alternatively, you might take students to the school library or resource center. Some students may also have devices of their own.
- Remind students to take notes while they conduct their research. They should write down information that they think they will probably include in their presentation.

REVIEW

AIM: To check and consolidate the knowledge that students should have learned today.

TIME: 5–10 minutes

- Draw students' attention to Review. Follow the steps for **Routine 15: Test a Partner.**
- When students are finished, invite a few volunteers to share for the class how they planned and performed their digital research.

SELF-ASSESS

AIM: To help students complete a truthful self-assessment and find the assistance they need to further develop; to encourage critical thinking.

TIME: to be completed at home

- Follow the steps for **Routine 17: 3-2-1**
- Afterwards, clarify any questions that students may still have.

LESSON 7 pp. 36–37



RESEARCH

AIM: To take notes identifying source material in preparation for a written report.

TIME: 10–15 minutes

1 Look and write

1. Read the directions and the example aloud and give students a few minutes to take notes in the space provided. Note: Some students may need additional paper to complete the activity.
2. Circulate as students work and provide help as necessary. In particular, students may need help locating names of authors and publishers. Explain: There are lots of different situations when you look for information online. Sometimes you will see the name of an author and sometimes you won't. If there is no author, you should at least include the name of the publisher or the host of the website. National Geographic Kids, for example, is hosted by National Geographic.

AIM: To prepare an outline for a report.

TIME: 10–12 minutes

2 Complete an outline

1. Read the directions aloud and then elaborate on the importance and structure of an outline: An outline is like a map. It shows the sequence of ideas and topics that you will cover during your report. In the introduction, you should give an overview of your presentation. Tell the audience what it's about without going into detail. Then, in each of the main sections, you should discuss one aspect or idea in more detail. You might give an interesting fact, for example, and explain why that fact is important. In the conclusion, summarize your presentation and remind the audience of your most important points.
2. Give students time to outline their report. Encourage them to include illustrations, as that will enhance their report and make it more interesting. Students can draw their own illustrations or photocopy, cut, and paste images that have been printed out from an online source.

Learn by doing LESSON 7 Planning digital searches

Research

1 Look and write

Review your notes on page 35. Write your sources below. Include all necessary information.

Sources:

____

Example: I found this information on the Egyptian Knowledge Bank. It's in a book called *The Great Pyramid and the Sphinx* by Asham B Bishay, published by Butterfly Readers.

2 Complete an outline

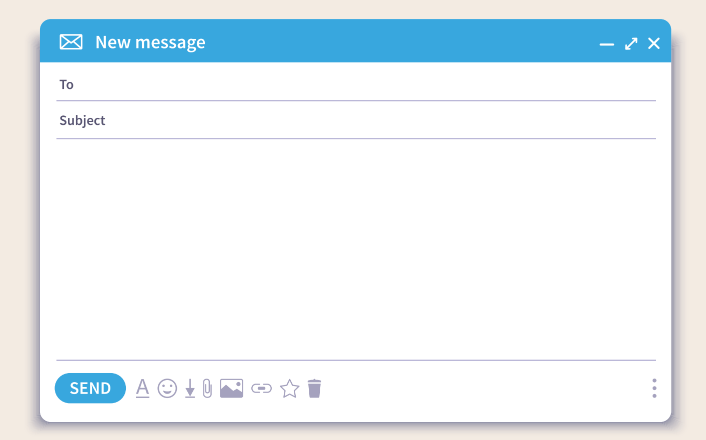
Use your notes from your search to create an outline that will help you write your report.

Introduction:	
Section 1:	
Section 2:	
Section 3:	
Conclusion:	

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3 Write your report

Use your outline to write your report. Review the steps on page 34. Remember to cite your sources.



ICT and Me

4 Think and answer

1. During your digital search, how could you be sure the sources you used were reliable? Did you come across any sources that you decided were unreliable? Name them.

2. How do you feel your outline helped to prepare you for writing your report?

3. How could you publish or share your report online?

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AIM: To create a written report.

TIME: 30–45 minutes

3 Write your report

1. Tell students they are now going to create their reports. Provide guidelines regarding length and other requirements. In general, students at this level can be expected to create a report of 150-250 words.
2. Distribute paper and pens or pencils. Have students use their notes to write their report (or to create an electronic version using a laptop, tablet, or some other digital device).
3. Remind students to check their work for spelling mistakes and other errors.

ICT AND ME

AIM: To review and evaluate the process that students went through in creating their reports.

TIME: 5–7 minutes

4 Think and answer

1. Read aloud the directions and then use the questions to lead a discussion about the process that students went through in creating their reports.
2. When you have finished the discussion, ask students to provide written responses to each of the questions in the spaces provided.

EXTENSION ACTIVITIES

1. Meet with students individually and talk with them about their reports. Ask if they have any remaining questions before they present their reports in Lesson 8.
2. Give students an opportunity to share their reports with a partner. Encourage partners to give each other feedback so that they can improve their reports.

LESSON 8 pp. 38–39

Synchronous and asynchronous communication

OBJECTIVES

- Discuss how to use synchronous and asynchronous communication with teachers and classmates.
- Communicate using digital tools.
- Discuss how to report findings using digital tools.

LIFE SKILLS

- Learning to do: decision-making
- Learning to know: critical thinking

VALUES

- Work values: transparency and integrity
- Personal values: independence

ISSUES AND CHALLENGES

- Citizenship issues: participation in scholarly research

MATERIALS NEEDED

- Classroom computers or tablets with access to the internet
- Stapler or binder (Extension Activities)

LESSON 8 Synchronous and asynchronous communication

Objectives

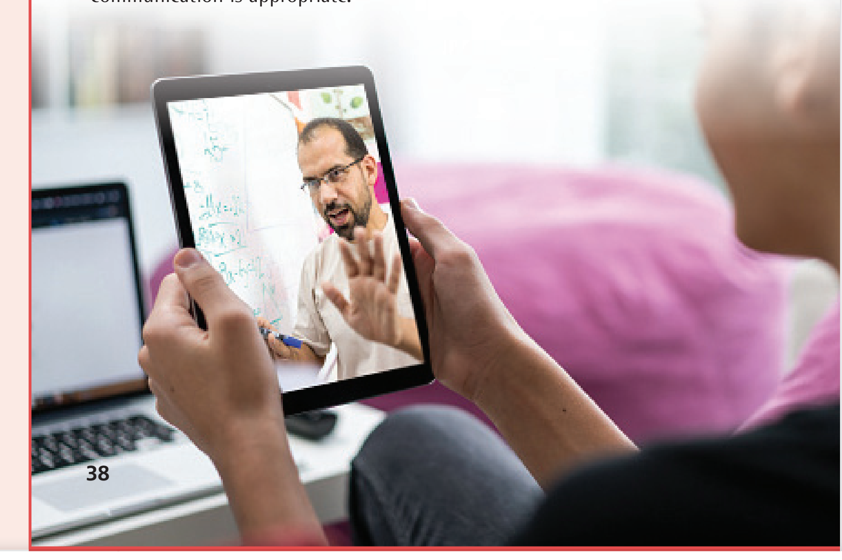
By the end of the lesson, I will be able to:	After the lesson, check the correct box: I can . . .		
• Discuss how to use synchronous and asynchronous communication with teachers and classmates.	Very well	OK	Need more work
• Communicate using digital tools.	Very well	OK	Need more work
• Discuss how to report findings using digital tools.	Very well	OK	Need more work

Engage

Think about your findings from the digital search you conducted in Lesson 7. How might you communicate this information to your teacher using the appropriate digital tools?

Learn

The internet allows us to communicate instantaneously. This is wonderful: we can send a quick "Happy Birthday", have friendly conversations, quickly check doubts with people who are not present. But instant communication is not always a good thing. Sometime we need to give ourselves, or the people with whom we are communicating time to consider information we send, our question or their answer. So it is important to know when each type of communication is appropriate.



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OBJECTIVES

AIM: To encourage students to take responsibility for their own learning needs and paths.

TIME: 2–3 minutes

- This activity involves critical thinking. Follow the steps for **Routine 2: What Do I Need to Do?**
- Ask What kind of things will we need to pay attention to during the theme? Point out that the lesson talks about different modes of digital communication.
- Elicit ideas from the students, e.g., I need to pay attention to details and definitions.

ENGAGE

AIM: To engage students in a discussion that leads to a lesson objective or life skill; use critical thinking to investigate clues in photos.

TIME: 3–5 minutes

- This activity promotes the skill of decision-making. Follow the steps for **Routine 5: Photo Detectives!**
- After pairs have discussed the photo, ask follow-up questions, such as What do you think the girl is looking at? Yes, she must be looking at a teacher or tutor who is giving a lesson. Ask students whether they think that the teacher is giving the lesson in "real time": Is he giving the lesson right now, or is it recorded? Why do you think so? Explain to students that communication in "real time" is synchronous and that communication that can be viewed or read at a later time is asynchronous.
- Read the **Engage** question again. Use it to prompt students to start thinking about how they will present their reports to you—in a synchronous format, or an asynchronous format.

LEARN

AIM: To activate students' background schema and encourage them to anticipate the content so they can build context before reading.

TIME: 3–5 minutes

- This activity promotes the skill of critical thinking. Follow the steps for **Routine 6: Preview.**
- Direct students' attention to the subheads. Say Subheads give clues about the ideas and information that will be covered. Based on the subheads you see here, what do you think the article is about? Guide students to the conclusion that the article compares and contrasts synchronous and asynchronous methods of communication.

SYNCHRONOUS

Synchronous communication is appropriate:
- between friends or close family
- when the information is urgent or needs to be transmitted quickly
- when the information is about day-to-day matters
- when an answer does not require very much thought or preparation.

ASYNCHRONOUS

Asynchronous communication is appropriate:
- between people who do not know each other well
- when the information is important but not urgent
- when the information is about sensitive or complex matters
- when an answer requires thought and preparation

Remember, online learning environments include synchronous and asynchronous methods of communication.
Choose the correct tool depending on the situation.

Explore

Refer to the report you wrote in Lesson 7, on page 37.
How do you communicate your findings to your teacher? Do you use a synchronous or an asynchronous digital tool?

Review

1. Discuss examples of when you might prefer to use synchronous or asynchronous methods to communicate with your teachers and classmates.
2. Discuss the digital tools you used to communicate your digital search findings to your teacher. Did you use a synchronous or an asynchronous form of communication? Explain your choice.

Self-assess

Go to the Objectives at the beginning of the lesson.
Check the correct I can . . . box.

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BE THE EXPERT

In **Learn by Doing**, on the next page, students will be prompted to present their findings to a friend, classmate, or family member. Some students may enjoy presenting their report in the form of a multimedia presentation. Microsoft Power Point® is one of the most popular presentation tools, along with Keynote® and Prezi®. If students are interested, help them look up a video-based tutorial on one of these multimedia presentation tools (you can easily find one on YouTube®).

TEACHING TIP

Play a game with students in which you describe a certain kind of scenario and then ask students to guess which mode of communication is best suited. Example: You missed class because your baby sister was sick and you had to stay home to take care of her. Now you have to tell your teacher about your absence. Which mode of communication is better, message board or email? (Answer: **Email is better because it's a private situation.**) Continue in this way until you have covered all the modes of communication that were presented in the lesson.

HOME-SCHOOL CONNECTION

Citizenship values: participation in scholarly research

Send a note home with students explaining to parents that their child is preparing for a presentation. Encourage parents to ask their children about their presentations and, if possible, to help them practice by rehearsing their presentation at home.

EXPLORE

AIM: To enable students to present their work using digital tools.

TIME: 20–30 minutes

- Tell students that they will now have an opportunity to present the findings contained in their reports.
- Give students time to decide how they want to present their findings. Some students may want to submit a written report to a message board, or they may want to send it to you via email. Others may want to give an oral summary through a video platform such as Zoom®.
- Make arrangements with students so that they can present their findings through the method of their choice.

REVIEW

AIM: To check and consolidate the knowledge that students should have learned today.

TIME: to be completed at home

- Draw students' attention to Review. Follow the steps for **Routine 16: Family Test.**
- Have students use the questions in Review as a way of telling family members about the findings in their report, how they communicated those findings to you, and the rationale they used for choosing that particular mode of communication.

SELF-ASSESS

AIM: To help students complete a truthful self-assessment and find the assistance they need to further develop; to encourage critical thinking.

TIME: to be completed at home

- Follow the steps for **Routine 18: Promise!**
- Praise students for their efforts. Give feedback that accentuates the progress they have made.

LESSON 8 pp. 40–41



LIFE SKILLS

AIM: To plan for the presentation of a report.

TIME: 15–17 minutes

1 Think and answer

1. Read the directions aloud and tell students that they will now prepare to present the findings in their report to a friend, classmate, or family member.
2. Read each item aloud and paraphrase or restate as necessary to help students understand the directions.
3. Give students time to respond to each prompt in writing. Circulate and provide help as necessary.
4. When students have completed Item 5, ask them if they have any questions. Clarify any misunderstandings as necessary.
5. Tell students that they now have a plan for presenting their report. Remind them to refer to their notes as they proceed to the next step.



LESSON 8 Synchronous and asynchronous communication

Life Skills

1 Think and answer

You just communicated your findings to your teacher using digital tools. This time, choose a friend, classmate, or family member to communicate your findings to. Answer the questions below to prepare.

1. Who did you choose?

____

2. What communication tool will you use to communicate your findings? Explain why.

____
____
____

3. Is the communication tool you chose synchronous or asynchronous? Explain how you know.

____
____
____

4. Do you use the same wording as when you communicated your findings to you teacher? Explain.

____
____
____
____

5. Do you have any questions about how to choose the right method of communication, based on your chosen audience? Write them here. Ask a teacher or family member for help.

____
____
____
____
____

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2 **Take notes**

Look at these situations and decide if you would use a synchronous or an asynchronous tool for each. Write notes about your choices.

- Give urgent news that require immediate action.
- Explain why you have not been able to visit your friend, so that he/she can understand why you couldn't visit.
- Ask a friend if they are free tomorrow afternoon.
- Ask someone you know to send you a photo.
- Ask your mother what things she wants you to buy from the store.
- Send a wish for an occasion, such as a birthday.
- Ask someone who is going to visit if they can eat a certain type of food.
- Ask a question whose answer involves complex information.
- Send a message to someone who may be busy studying, at school, or working.
- Responding to an email or a written letter from a teacher.
- Send a message to a teacher who you do not know very well.

3 **Communicate your findings**

Discuss your findings with the person you chose.



ICT and Me

4 **Think and answer**

You have communicated your findings from a digital search.

1. Compare how you communicated your findings to your teacher and to the person you chose. Clarify this.

2. What might you do differently next time to communicate your findings? Explain.

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AIM: To think critically about how to best communicate digitally in a variety of situations.

TIME: 5–7 minutes

2 Take notes

1. Read the directions aloud and emphasize that students should think about the most efficient and effective form of communication for each scenario.
2. Give students a few minutes to take notes in the space provided. Circulate as students work, providing help if necessary.

AIM: To present a report.

TIME: 5–7 minutes

3 Communicate your findings

1. Now it's time to discuss your findings with the person you chose.
2. Choose a synchronous or asynchronous method of sharing with your partner.

ICT AND ME

AIM: To review and evaluate the process that students went through in presenting their reports.

TIME: 5–7 minutes

4 Think and answer

1. Read aloud the directions and then use the questions to lead a discussion about the process that students went through in presenting their reports.
2. When you have finished the discussion, ask students to provide written responses to each of the questions in the spaces provided. Doing this will provide students with an opportunity to reflect on what went well and what they might like to do differently next time.

EXTENSION ACTIVITIES

1. For students who haven't yet done so, encourage them to take their reports home so they can read them aloud to family members. Parents especially will be interested to see the work that they have done.
2. Consider putting students' reports together in an anthology. You can bind the reports together using a heavy-duty stapler, or you can put them in a binder. Place the anthology in a reading center where students can view each other's work.

REVIEW Theme 3 pp. 42–43

VOCABULARY

AIM: To reinforce the acquisition of key vocabulary and concepts related to the topic of digital citizenship.

TIME: 5–7 minutes

1 Write and compare

1. Read the directions aloud, then form pairs of students so that students can work out their answers together.
2. When pairs have finished, invite students to share their answers. Confirm or modify their responses as necessary. (Answers: **1. Synchronous communication is when two or more people are communicating with each other at the same time. Asynchronous communication is when one person leaves a digital message that the other person can see at a later time. 2. An unreliable source is a source that contains information that is inaccurate or misleading. Bias is a form of prejudice in favor of or against a particular person, thing, or idea. 3. Digital citizenship refers to the ability to participate in the world of online communication. A digital footprint is record of what you do online, including the sites you visit and the things you post.**)

REVIEW QUESTIONS

AIM: To review key concepts and information related to the topic of digital citizenship.

TIME: 5–7 minutes

2 Read and answer

1. Read the directions aloud. Tell students that there may be more than one answer to the questions. Allow students to team up with a classmate so that they can work out their answers together.
2. When pairs have finished, invite students to share their answers. Provide feedback, confirming or modifying answers as necessary. (Suggested answers: **1. Two ways of protecting your digital footprint are to create strong passwords and to use privacy filters. 2. Tablets provide access to the internet and are therefore good research tools. 3. Synchronous communication includes video conferencing, live chats, and virtual classrooms. 4. Asynchronous communication includes videos, articles, and lectures that have been uploaded to the internet. 5. Emails are more formal because you have to think about your message before sending, and you have to follow a particular format. 6. An online learning environment includes resources such as a virtual lab, interactive mapmaking tools, and online databases. 7. One example of a reliable source is National Geographic. It's well-known and has an excellent reputation. An unreliable source might be a blog that is full of unverified opinions. 8. Online learning environments use synchronous communication when the students and teacher are gathered together in a virtual space at the same time. They may also use forms of asynchronous communication, as when the teacher shows a pre-recorded video.**)

REVIEW Theme 3

Vocabulary

1 Write and compare

Write a sentence for each set of words to explain the connection between them. Then compare your sentences with a partner.

1. synchronous communication and asynchronous communication
   ____
2. unreliable source and bias
   ____
3. digital citizenship and digital footprint
   ____

Review Questions

2 Read and answer

1. List two ideas to protect your digital footprint.
   ____
2. How can tablets aid students in their learning?
   ____
3. List three examples of synchronous communication.
   ____
4. List three examples of asynchronous communication.
   ____
5. Why are emails considered more formal than instant messaging?
   ____
6. Explain what an online learning environment is.
   ____
7. Give one example of a reliable source and one example of an unreliable source.
   ____
8. Explain how online learning environments use synchronous and asynchronous communication.
   ____

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Critical Thinking

3 Think and answer

1. In what ways can you use e-communication to help your community?
2. Do you feel more comfortable communicating using synchronous communication or asynchronous communication? Explain why.
3. You have just completed research on a topic that means a lot to you. You want to share your results with your friends. What method of e-communication would you use to share this information? Explain your choice.

Essential Question

4 Think and complete

Think about the information that you have learned in this theme. How does it help you to understand how to use the internet to communicate effectively? Complete the sentence with your own ideas.

After studying this theme, I know that I can use the internet to communicate effectively because

Activity

5 Research, create, and show

Create your own exhibition about an online learning source that you find interesting.

Search for photographs, screenshots, or draw pictures of it. Then make labels and write captions for your photographs, screenshots, or illustrations. Include information about:

- what kinds of information / activities it has
- how it works / how it provides information
- how it helps people of determination to learn special features it has

Invite your classmates to visit your exhibition.

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CRITICAL THINKING

AIM: To review key concepts and information related to the topic of digital citizenship.

TIME: 5-7 minutes

3 Think and answer

1. Read aloud the questions and give students time to work out their responses independently. Tell students that there are no right or wrong answers. The questions are asking them to reflect on their own experience and thought processes.
2. When students are finished, use the questions as a way of reviewing key concepts. Invite students to share their responses to each question, and provide feedback as appropriate.

ESSENTIAL QUESTION

AIM: To reflect on the **Essential Question** and respond to it in writing.

TIME: 7-10 minutes

4 Think and complete

1. Read aloud the directions. Have students work independently in completing the sentence frame.
2. When students are finished, form pairs or small groups. Encourage group members to share their completed sentences with the group.
3. After the group discussions, invite a few students to share their sentences with the class.

ACTIVITY

AIM: To reflect on the **Essential Question** and respond to it in writing.

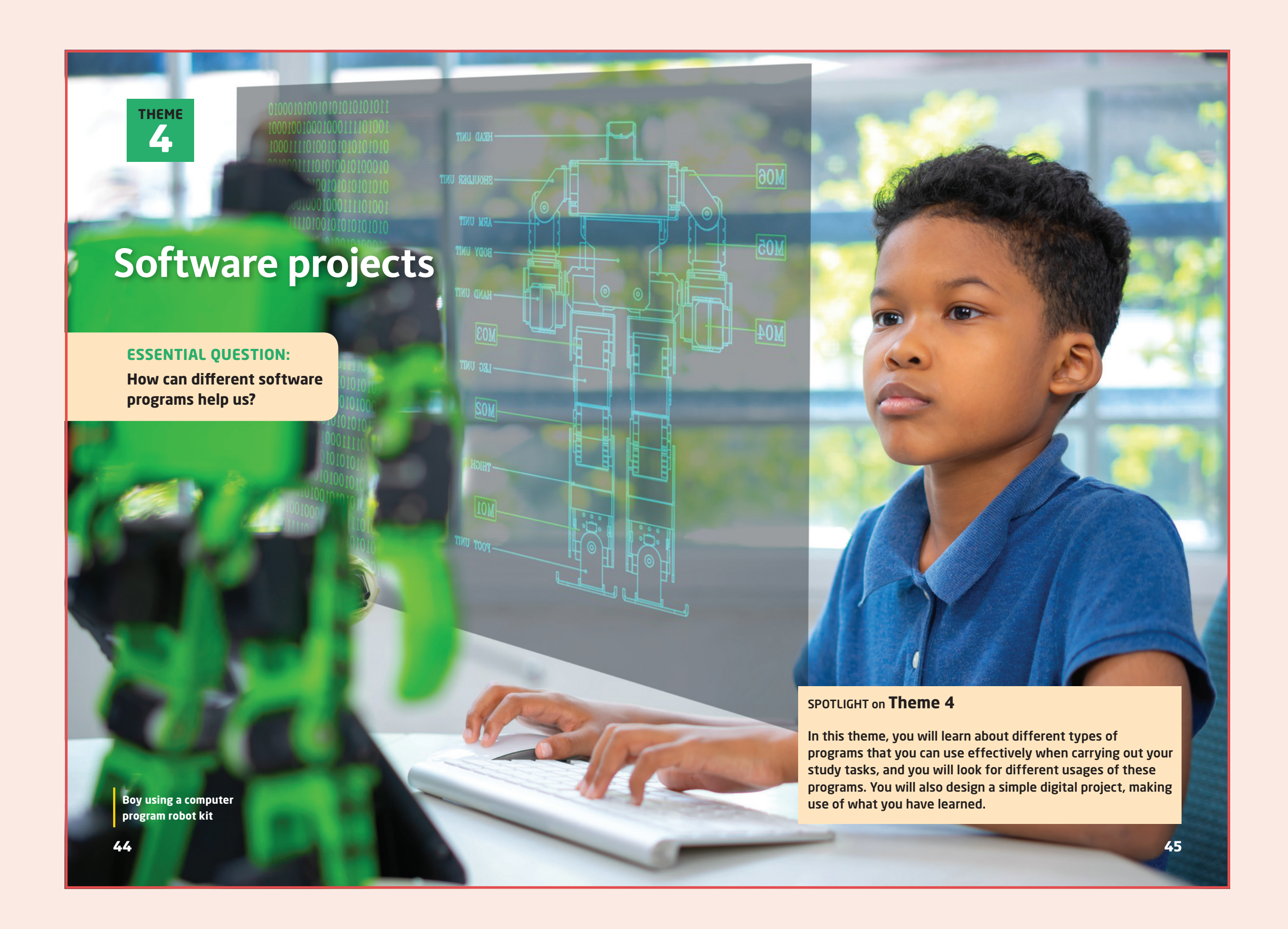
TIME: 20-25 minutes

5 Research, create, and show

1. Read aloud the directions. Help students choose a topic for the activity by reviewing the different forms of online education and communication that have been covered in this theme.
2. Say: Choose one of the online learning sources that you think is the most interesting. Find pictures or draw a picture that provides information about it. If you choose virtual labs, for example, you might find photographs or draw pictures that show what a virtual lab looks like. Distribute art supplies and encourage students to work on their drawings.
3. As students finish each illustration, help them create a caption for it. They might explain what makes the learning source so interesting, for example, or they might explain why they like this particular form of online education.
4. Display students' drawings on the wall to create a gallery of their work. Invite students from other classes to come in and view the exhibition.

Pacing Guide for Theme 4

Lessons	Activities	Recommended timings	Lessons	Activities	Recommended timings
Theme opener; 1.1 and 1.2	Theme opener	7-9 minutes	**Lesson 5 and LBD**	5.1 Objectives 5.1 Engage 5.1 Learn 5.1 Explore 5.1 Review 5.1 Self-assess 5.2 Learn by doing	2-3 minutes 2-5 minutes 10-15 minutes 7-10 minutes 5-10 minutes At home 36-50 minutes
Lesson 1: Explorer in Action	1.1 Objectives 1.1 Engage 1.1 Learn 1.1 Video 1.1 Explore 1.1 Review 1.1 Self-assess 1.2 Learn by doing	2-3 minutes 2-5 minutes 10-15 minutes 5-10 minutes 7-10 minutes 5-10 minutes At home 28-32 minutes	**Lesson 6 and LBD**	6.1 Objectives 6.1 Engage 6.1 Learn 6.1 Explore 6.1 Review 6.1 Self-assess 6.2 Learn by doing	2-3 minutes 3-5 minutes 15-20 minutes 7-10 minutes 5-10 minutes 5-7 minutes 21-30 minutes
Lesson 2 and LBD	2.1 Objectives 2.1 Engage 2.1 Learn 2.1 Explore 2.1 Review 2.1 Self-assess 2.2 Learn by doing	2-3 minutes 2-5 minutes 15-20 minutes 7-10 minutes 10-15 minutes at home At home 25-36 minutes	**Lesson 7 and LBD**	7.1 Objectives 7.1 Engage 7.1 Learn 7.1 Explore 7.1 Review 7.1 Self-assess 7.2 Learn by doing	2-3 minutes 2-5 minutes 10-12 minutes 5-10 minutes 7-10 minutes at home At home 18-26 minutes
Lesson 3 and LBD	3.1 Objectives 3.1 Engage 3.1 Learn 3.1 Explore 3.1 Review 3.1 Self-assess 3.2 Learn by doing	2-3 minutes 2-5 minutes 2-5 minutes 7-10 minutes 5-10 minutes at home At home 20-29 minutes	**Lesson 8 and LBD**	8.1 Objectives 8.1 Engage 8.1 Learn 8.1 Explore 8.1 Review 8.1 Self-assess 8.2 Learn by doing	2-3 minutes 2-5 minutes 2-5 minutes 10 minutes 5-10 minutes 5-7 minutes 38-56 minutes
Lesson 4 and LBD	4.1 Objectives 4.1 Engage 4.1 Learn 4.1 Explore 4.1 Review 4.1 Self-assess 4.2 Learn by doing	2-3 minutes 2-5 minutes 10-12 minutes 7-10 minutes 5-10 minutes at home At home 11-16 minutes	**Review**	R.2 Vocabulary R.2 Review Questions R.2 Critical Thinking R.2 Essential Question R.2 Activity	5-7 minutes 5-7 minutes 5-7 minutes 7-10 minutes 20-25 minutes



THEME 4 pp. 44–45

Software Projects

ESSENTIAL QUESTION

How can different software programs help us?

AIM: To introduce the topic of the theme, which explores the use of software, digital applications, algorithms, the principles of coding, and graphic art.

TIME: 3–4 minutes

Read the Essential Question with the class. Explain that software refers to computer programs that make it possible for the computer to function. Software, in other words, is like a set of instructions that tell the computer what to do. Tell the class that this theme will help them to learn more about software programs and how to use them.

Spotlight on Theme 4

AIM: To activate prior knowledge and build context related to different software programs.

TIME: 4–5 minutes

Look at the photo with the class. Ask students what the boy is doing. Confirm for them that he is using a software program to design a robot.

Explain to students that software is distinct from a computer's hardware, which refers to the physical components of a computer system: the keyboard, screen, processor, and so on. Name one or two software programs you think the students might be familiar with, and then invite them to name several other programs that they know about.

Follow up by asking students to read the Spotlight text in pairs so they can learn more about the theme. Afterwards, invite volunteers to share what they have learned.

LESSON I pp. 46–47

EXPLORER IN ACTION

OBJECTIVES

- Describe different kinds of software and how they are used.
- Discuss the role of different digital applications.
- Identify ways in which ICT tools are helping wildlife.

LIFE SKILLS

- Learning to do: productivity; setting goals
- Personal values: accountability; setting expectations

VALUES

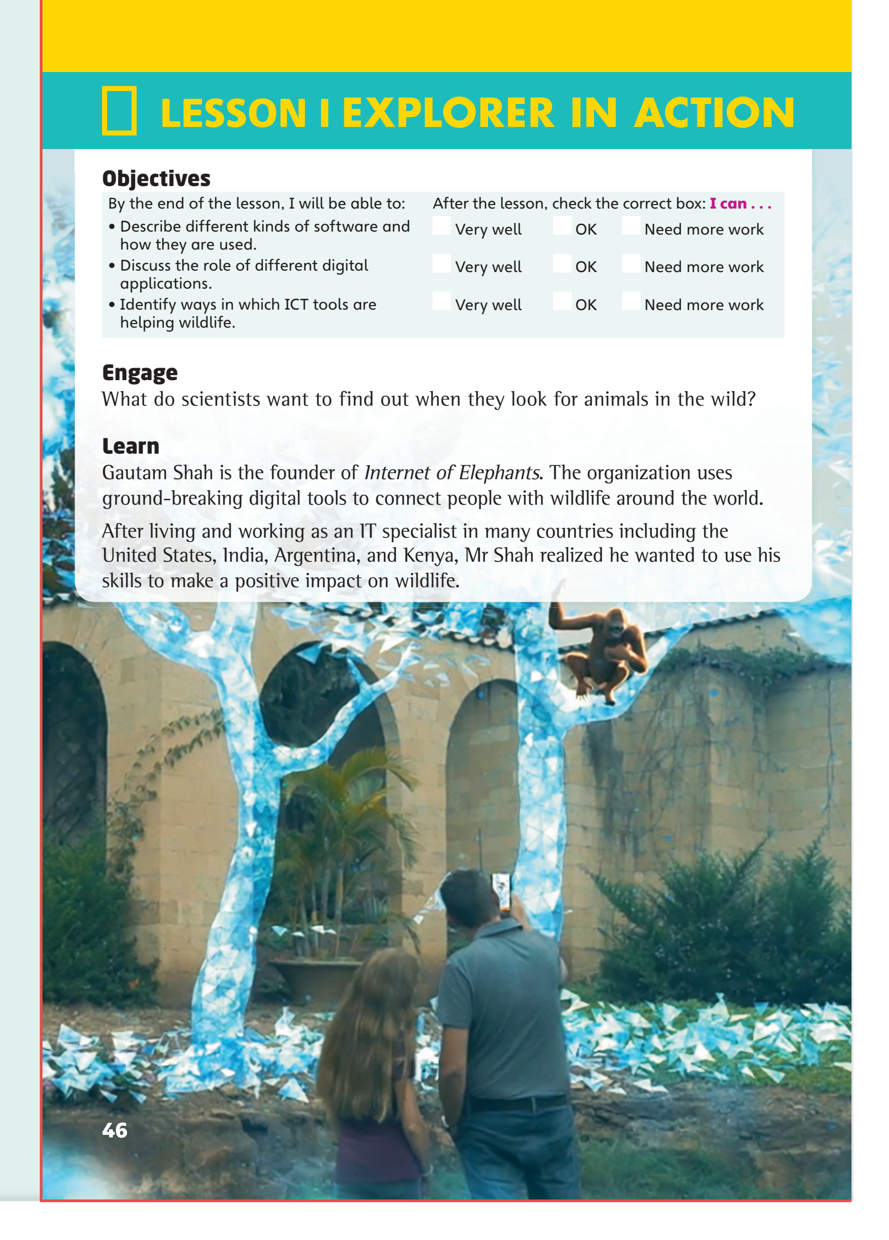
- Work values: cooperation
- Personal values: compassion

ISSUES AND CHALLENGES

- Environment and development issues: environmental responsibility; sustainable development

MATERIALS NEEDED

- Art supplies (Teaching Tip)
- Access to computers and/or smartboard (Be An Expert)



LESSON I EXPLORER IN ACTION

Objectives

By the end of the lesson, I will be able to:	After the lesson, check the correct box: **I can . . .**		
• Describe different kinds of software and how they are used.	Very well	OK	Need more work
• Discuss the role of different digital applications.	Very well	OK	Need more work
• Identify ways in which ICT tools are helping wildlife.	Very well	OK	Need more work

Engage

What do scientists want to find out when they look for animals in the wild?

Learn

Gautam Shah is the founder of *Internet of Elephants*. The organization uses ground-breaking digital tools to connect people with wildlife around the world.

After living and working as an IT specialist in many countries including the United States, India, Argentina, and Kenya, Mr Shah realized he wanted to use his skills to make a positive impact on wildlife.

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OBJECTIVES

AIM: To engage students' interest in the lesson objectives and content.

TIME: 2–3 minutes

- This activity helps students to set goals. Follow the steps for **Routine I: Time to Explore!**
  1. Draw students' attention to the Lesson topic. Say This lesson we're going to learn about computer software and other related topics.
  2. Read the objectives aloud to the class.
  3. Write on the board *Now's our chance to explore ….* To ensure that students think in detail about the objectives, write more actions directly below *explore*, e.g.: *think about, learn about, study, discuss, look at, investigate, consider, plan.*
  4. Give students a minute to look at the lesson and assess what they'll explore.
  5. Elicit answers from individual students, e.g.; **Now's our chance to … learn about computer software and other forms of ICT, find out how ICT tools are helping animals around the world, etc.**).

ENGAGE

AIM: To engage students in a discussion that leads to a lesson objective or life skill; use critical thinking to investigate clues in photos.

TIME: 2–5 minutes

- This activity explores the issue of environmental responsibility and sustainable development. Follow the steps for **Routine 5: Photo Detectives!**
  1. Draw students' attention to **Engage**. Tell students to cover the photo with a book.
  2. Read the **Engage** question aloud.
  3. Elicit some quick answers from the class.
  4. Say You're going to be photo detectives! Uncover the photo and look for clues!
  5. Say Sit knee to knee. Investigate the photos. Tell each other what you find.
  6. Read the **Engage** question aloud again. Elicit answers from individual students. (Suggested answer: **There are two people in what appears to be a wildlife preserve or natural setting. They might be scientists or researchers. It looks like they are taking a video of a gorilla so that they can learn how the animal lives.**)

LEARN

AIM: To enable students to read text in a way that maintains their interest.

TIME: 15–20 minutes

Introduce the topic. Now we're going to read about Mr. Shah and learn how he uses technology to bring wildlife into people's daily lives.

- Follow the steps for **Routine 10: Popcorn Reading.**
  1. Say We're going to try Popcorn Reading now. I'll ask a student to read aloud. When I say "Popcorn," that student should stop, look around, quickly choose the next person to read and say their name.
  2. Remind the class Remember that you must choose a NEW person; don't choose the person who just read! And stay on your toes, because you could be called at any time!
  3. Assign the first person to read aloud. The other students read along silently.
  4. Call "Popcorn" when the reader reaches a logical point in the text (e.g., the end of a paragraph, bullet point, or chunk of text in the chart). That reader shouts the name of the next person to read.

OPTIONAL: Instead of calling out their name, the reader could tap another student on the shoulder.

  5. The activity continues in this way, in the form of a Round Robin, until you reach the end. At the end of Paragraph 2, ask How does *Internet of Elephants* connect people to wildlife? (Suggested answer: **It allows people, no matter where they live, to follow an animal in its natural habitat as it lives its daily life.**)

In 2014, Mr Shah quit his job in IT and began to look into ways that technology could be used for wildlife conservation. Wildlife conservation is protecting animals in their natural habitats.

Mr Shah believes in using technology and online games to bring wildlife into people's daily lives. For that reason, he set up *Internet of Elephants*. The team at *Internet of Elephants* works with animal conservation organizations from all over the world and uses the data they collect by GPS to help create interactive online games.

Internet of Elephants, creates unique mobile games, using augmented reality, and data visualization that allow people to interact with amazing creatures. Augmented reality lets you virtually see the real environment of the things you would like to see, and presents you with information about them through screens and digital tools made specifically for this purpose. The games tell the stories of individual animals, and players can follow their daily lives.

Mr Shah hopes *Internet of Elephants* is the start of a new approach to engaging the public with wildlife. The mobile games mean that wherever you are in the world, you can interact with amazing animals in countries close to your country or far away!

Video

Watch the video about Gautam Shah's projects. What technology does the team use?

Explore

Being good at using ICT tools and knowing how to use technology creatively and productively can lead to many interesting careers. Research different careers by discussing with your teachers, family, and other students.

Think about careers that benefit the community and society. What kind of jobs interest you the most? Explain why.

Review

1. What animals would you like to see in their natural habitats? What would you like to know about them?
2. What kind of technology could you use to help discover the information you need?

Self-assess

Go to the Objectives at the beginning of the lesson.

Check the correct I can . . . box.

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BE THE EXPERT

The *Internet of Elephants*, which was founded by Gautam Shah, works to promote connections between consumer engagement and wildlife conservation. Some of the programs they have created include: Wildeverse, in which players go on missions to keep wild animals safe; Safari Central, an app that allows users to snap a selfie with endangered animals; and Run Wild, another creative app that pits users in a "race" against Uuliin the snow leopard. Learn more by visiting their website at: https://www.internetofelephants.com/#wildlife-stories.

TEACHING TIP

Consider helping students to start a "portrait gallery" of wild animals in your classroom. Distribute art supplies and then provide magazines and books that feature photographs of wild animals. Alternatively, you could have students search for images online. Tell students to choose an animal that interests them and to then use the resources you provided as a model in drawing a picture of that animal. When they are finished with their portraits, display students' work on the wall.

HOME-SCHOOL CONNECTION

Life skill: Academic values: appreciation of technology

Have students ask family members about wild animals they have seen or know about. Many parents may have seen or had encounters with a wide array of animals that are native to Egypt, including the Egyptian vulture, the Scimitar oryx, and the Nubian ibex, among many others. Invite students to share what they learned with the class.

VIDEO

AIM: To learn more about Mr. Shah's work in promoting animal conservation and sustainable development.

TIME: 5-10 minutes

- Follow the steps for **Routine 19: Preview, View, Review.**
    1. Say You are going to watch a video about Gautam Shah. What do you know about him so far?
    2. Encourage students to answer with as much detail as they can.
    3. Before viewing the video, ask: How can technology help animals in the wild? Tell students to keep the question in mind as they watch the video.
    4. Play the video once or twice.
    5. Form pairs of students and have them discuss their answers to the question.

(Suggested answer: **Mr. Shah uses technology to track animals in the wild. He collects GPS data that helps him learn about their movements and social behavior. Then he uses that data to create online games, which helps to educate people about animal conservation.**)

OPTIONAL: What did you find surprising about the video? What did you learn that you didn't know before?

EXPLORE

AIM: To explore ideas and information that were introduced through the reading passage in **Learn**.

TIME: 7-10 minutes

- Follow the steps for **Routine 12: Time for a Discussion!**
    1. Tell students that the class will discuss these questions as a way of reviewing the material that they just read.
    2. Read aloud the instructions and invite students to respond. Provide feedback as the discussion progresses, helping to clarify misunderstandings as necessary.
    3. When the discussion has concluded, ask students to share about one thing from the discussion that they want to remember.

REVIEW

AIM: To check and consolidate the knowledge that students should have learned today.

TIME: 10-15 minutes

- Follow the steps for **Routine 15: Test a Partner.**
    1. Draw students' attention to **Review**. Explain that students are going to test each other on what they've learned this lesson.
    2. Say Sit with a classmate, knee-to-knee. Discuss the questions in your book.
    3. Move around the classroom and monitor the students. Make notes on things that they've learned incorrectly (or they've forgotten) and things they've done well.
    4. Say Stop now. I want to review a few things with you. Clarify any misinformation.

SELF-ASSESS

AIM: To help students complete a truthful self-assessment and find the assistance they need to further develop.

TIME: to be completed at home

- Follow the steps for **Routine 17: 3-2-1.**
    1. Draw students' attention to Self-assess. Read the first instruction aloud and point to the I can… boxes.
    2. Say Think about how well you can do each Objective. You have three choices: I can do it very well. I can do it OK, and I need more work. Check the correct box at home.
    3. Remind students to be honest!
    4. Say After you've completed the self-assessment, write a short list for me:
        - three things you found interesting in this lesson
        - two questions you still have for me
        - one thing you felt proud about, maybe something you did well

OPTIONAL: Write the list on the board for students to copy.

5. Next lesson, clarify any questions that students still have.

Teaching support for an integrated classroom

Intellectual disability and slow learning	Autism	Hearing impairment	Learning disability	Motor disability and cerebral palsy	Blind and weak sighted
- Writing the vocabularies (software, digital application, algorithms) on the board or highlighting them in the Student's Book. - Giving a lot of examples about digital technology while simplifying its explanation. - Summarizing the text concerning Gautam Shah to main ideas and specific short sentences. - Playing the video about the explorer Gautam Shah, by sectioning it and playing one section at a time, commenting on it and deducing its main idea, then moving on to the rest of the sections and do the same.				- Supporting students suffering from motor disability and cerebral palsy by asking their classmates to help them write. - Making their responses simpler, they could be oral responses, signs or hand gestures, or answers via a computer, if possible. - Including them in groups and giving them tasks according to their disabilities.	Describing the content of the videos to the blind.
		- Facing hearing impaired students while commenting on the videos.			

LESSON 1 pp. 48–49



LIFE SKILLS

AIM: To help students identify apps that they use in daily life.

TIME: 3–4 minutes

1 Read and answer

1. Read aloud the question: What apps do you use regularly?
2. Start a Mind Map by writing the phrase Apps we use regularly in the center of the board.
3. As students share about the apps they regularly use, add the name of each app to the Mind Map.
4. When you are finished, review the Mind Map with the class. Tell students that they will learn more about these and other apps as they go through the unit.



Graphic organizer

AIM: To learn about software that is used in science, technology, and mathematics.

TIME: 5–7 minutes

2 Read and match

1. Read the directions aloud. Then point out to students that they have to match the terms in colored boxes with the images. It may then be helpful to explain the meaning of each term: *Mobile gaming* means games on cell phones and tablets. *Data visualization* is the use of graphics to help visualize, information. *Augmented reality* is a type of "virtual reality."
2. Have students work independently or in pairs in matching each term with its corresponding photo.

LESSON 1 EXPLORER IN ACTION

Life skills

1 Read and answer

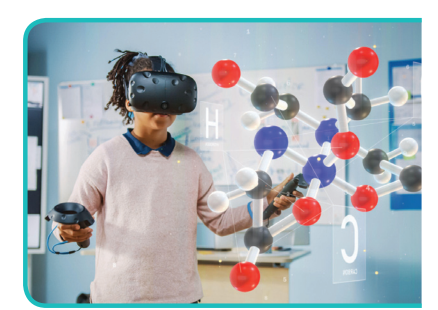
What apps do you use regularly?

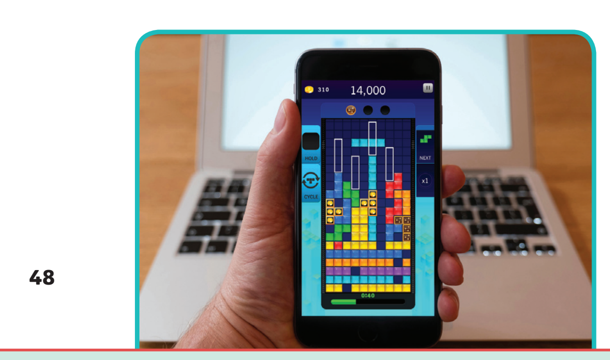
Graphic Organizer

2 Read and match the terms to the photos.

Mobile gaming | Data display software | Augmented reality







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3. When they are finished, help students check their answers. (Answers: **Top left: Data visualization; Top right: Augmented reality; Bottom photo: Mobile gaming.**)
4. Use the photos as a springboard for a discussion on how these different forms of technology are used, e.g., How is the girl using augmented reality? (Suggested answer: **She is using it to shrink herself down to the size of a molecule so she can see what a molecule looks like.**)

Critical Thinking

3 Think and answer

Read the scenarios below. Which digital tools from Exercise 2 would be used for each scenario?

1 You're on a long, boring journey and don't want to read a book.

---

2 In class, you are learning about the solar system and your teacher wants you to have a full, immersive experience.

---

3 You're trying to explain some complicated statistics from a text but think your friend would understand it better in a chart.

---

4 Discuss these questions in pairs

1 Mr Shah uses his skills in IT and his interest in nature conservation to create apps that are fun and educational. What other interests could be combined with IT skills to create educational apps?

2 What inventions do you think will come next?

5 Think and answer

Imagine you are going to create an app that uses GPS, augmented reality, and mobile gaming. Complete this description about your app and how it will work.

My app will be called ...

The app is designed to ...

Three words to describe my app are ...

The app can be used ...

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CRITICAL THINKING

AIM: To apply what students have learned to a variety of everyday situations.

TIME: 3–4 minutes

3 Think and answer

1. Read the directions aloud.
2. Form pairs of students. Have students read the scenarios and write down the type of tool they would use in each situation. Remind students to refer back to the tools they learned about on the previous page if necessary.
3. When students are finished, help them check their work. (Answers: 1. Mobile gaming; 2. Augmented reality; 3. Data visualization.)

AIM: To think and discuss ways that ICT could be applied to situations in daily life.

TIME: 7–10 minutes

4 Discuss these questions in pairs

1. Tell students they will work in pairs. Read the questions aloud and verify that students understand what the questions are asking.
2. Form pairs of students. Have partners discuss their responses to each question.
3. Invite partners to share their ideas with the rest of the class. Provide feedback as necessary.

AIM: To write a description of a hypothetical app of the student's own creation.

TIME: 5–7 minutes

5 Think and answer

1. Read aloud the directions. Make sure that students understand the task.
2. Have students work independently in completing the form.
3. When they are finished filling out the form, have students form small groups so that they can share their ideas with other group members. Circulate as groups discuss and provide affirmative feedback.

EXTENSION ACTIVITIES

1. Do an online search for free online data visualization tools. One such program, for example, is public.tableau.com. It provides free tools that allow users to create interactive graphics, and it also hosts an extensive library of data visualizations. Visiting one of these sites can help you illustrate for students the many different ways that data visualization is used in today's world.
2. Students are likely aware of many gaming tools that are available online. Ask them to share about their favorites, and if you think it is appropriate, you may even lead the class in a game tournament. One website you might find useful is games.aarp.org, which hosts a variety of games such as Mahjong, crossword puzzles, and trivia games. The games have been designed for seniors, but many of them can be played by children as well.

LESSON 2 pp. 50–51

Problem-solving skills

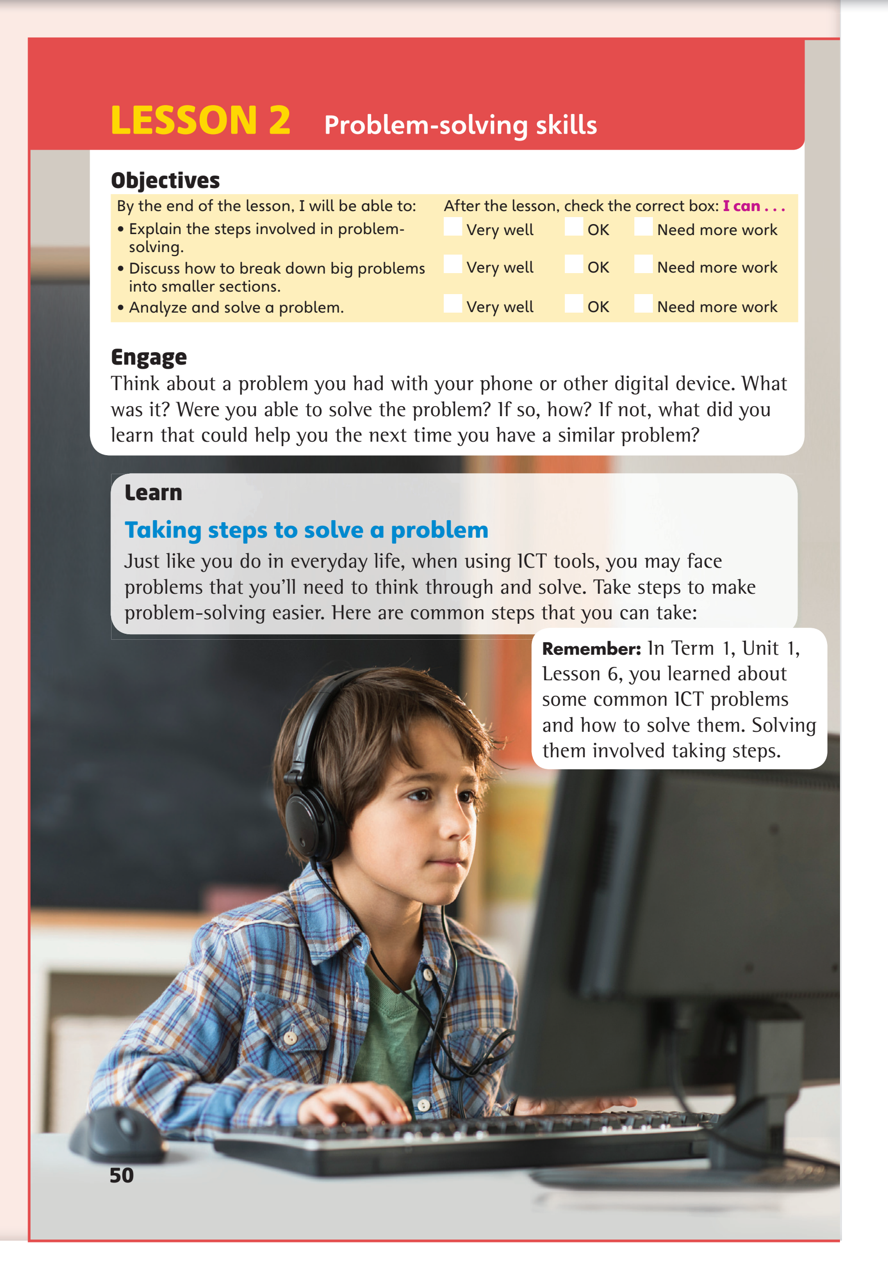
OBJECTIVES
- Explain the steps involved in problem solving.
- Discuss how to break down big problems into smaller sections.
- Analyze and solve a problem.

LIFE SKILLS
- Learning to know: critical thinking; problem solving

VALUES
- Work values: cooperation

ISSUES AND CHALLENGES
- Citizenship issues: belonging
- Environment and developmental issues: social participation

MATERIALS NEEDED
- Several decks of playing cards (Teaching Tip)
- Drawing paper and crayons or markers (Extension Activities)



LESSON 2 Problem-solving skills

Objectives

By the end of the lesson, I will be able to:	After the lesson, check the correct box: **I can . . .**		
• Explain the steps involved in problem-solving.	Very well	OK	Need more work
• Discuss how to break down big problems into smaller sections.	Very well	OK	Need more work
• Analyze and solve a problem.	Very well	OK	Need more work

Engage

Think about a problem you had with your phone or other digital device. What was it? Were you able to solve the problem? If so, how? If not, what did you learn that could help you the next time you have a similar problem?

Learn

Taking steps to solve a problem

Just like you do in everyday life, when using ICT tools, you may face problems that you'll need to think through and solve. Take steps to make problem-solving easier. Here are common steps that you can take:

Remember: In Term 1, Unit 1, Lesson 6, you learned about some common ICT problems and how to solve them. Solving them involved taking steps.

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OBJECTIVES

AIM: To engage students' interest in the lesson objectives and content.

TIME: 2–3 minutes

- Follow the steps for **Routine I: Time to Explore!**
  1. Say This lesson we're going to learn how to solve problems.
  2. Read the objectives aloud to the class.
  3. Write on the board *Now's out chance to explore ….* To ensure that students think in detail about the objectives, write more actions directly below *explore* e.g.: *think about, learn about, study, discuss, look at, investigate, consider, plan.*
  4. Give students a minute to look at the lesson and assess what they'll explore.
  5. Elicit answers from individual students, e.g.: **Now's our chance to … learn about the steps involved in problem solving, figure out how to break down big problems into smaller steps, etc.**).
  6. Say By the end of the lesson, we will have skills that we can use when solving problems.

ENGAGE

AIM: To enable students to participate confidently and collaboratively in a class discussion that leads to the objectives of the lesson.

TIME: 2–5 minutes

- This activity explores the process of analyzing and solving a problem.
- Follow the steps for **Routine 4: Think-Pair-Share.**
    1. Draw students' attention to **Engage**.
    2. Say I'm going to ask you a question. Don't say anything! Just think about it quietly.
    3. Read aloud the question. Let students think silently about some possible answers. They may make simple notes if they wish.
    4. After a minute, say Now sit shoulder-to-shoulder with a classmate and share ideas. You can make notes, but keep them very short.
    5. Check that the students are comparing their ideas with a classmate.
    6. Say I'm going to ask the question again. This time, put up your hand to answer.
    7. Read the question aloud again. Call on students with their hands up and have them share their ideas with the class. They can refer to their notes but shouldn't read whole sentences aloud.

OPTIONAL: To encourage more discussion, ask follow-up questions <Name>, what do you think? <Name>, why do you think that? Can you give an example? etc.

LEARN

AIM: To enable students to read text in a way that maintains their interest; to help students improve their own reading ability.

TIME: 15–20 minutes

- The reading gives tips and strategies on how to solve problems.
- Follow the steps for **Routine 11: Buddy Reading.**
    1. Form pairs. Students sit with a classmate, preferably with a similar reading ability, shoulder-to-shoulder.
    2. Say You're Reading Buddies. That means you're reading friends, so your job is to help each other. You're going to take turns reading the text to each other. If you're reading, remember that you can ask for support from your Reading Buddy, or even ask them to take over for a while. I'll be moving around the classroom if you need me.
    3. Point to the first paragraph of the text. Tell students to take turns reading each paragraph aloud to their partner.
    4. While Reading Buddies work together, circulate around the room and provide help with pronunciation and comprehension as necessary.
    5. To speed up the lesson, shout My turn! and read a section aloud. Then hand over the next section to the buddies. Continue alternating like this, so that they receive practice listening to you, as well as to each other.

1. Construct a Hypothesis. A hypothesis is an educated guess about how things work. It is an attempt to answer your question with an explanation that can be tested.
2. Test your Hypothesis. Do not conduct any test which is not safe!
3. Was your test successful? If not, don't worry, we learn from our mistakes. What did you learn? How can this help you make your next hypothesis?

Breaking down problems into smaller sections

Some ICT problems may be more complicated than others. Work on solving such problems in small sections, step-by-step. Read the real-world problem below.

Your teacher asks you to help organize the class trip.

At first, the task you're being assigned may seem quite difficult. But if you break it down into multiple smaller tasks, it becomes more manageable.

Note: If you have a group of people solving a problem, assign each person one section.

- Decide on a destination for the trip.
- Determine when you will go and at what time.
- Find out the price of the trip per student.
- Determine how you and your class will get to the destination.
- Determine what everyone will need to bring with them.
- Come up with a list of rules to follow on the day of the trip.

When solving larger ICT problems, break them down just like the real-world example above.

Explore

Work in a group of four. Read the following problems and choose one of them:

- papers are not coming out of the printer during the printing process
- the speakers are not working
- the computer is having difficulty responding to user commands

Discuss how to solve it.

Review

1. How can breaking down a big problem into smaller sections help you?
2. How did working as a group help you to solve the problem in the Explore section?

Self-assess

Go to the Objectives at the beginning of the lesson.
Check the correct I can . . . box.

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BE THE EXPERT

The problem solving method described in **Learn** is sometimes referred to as a "divide and conquer algorithm." It is the same method that a post office typically uses to route mail. First, mail is sorted into separate bins for different geographical areas. Then, each bin is sorted into smaller batches for sub-regions, and so on. Similar methods are used in a wide array of other tasks, from sorting books at a library to organizing orders at a restaurant.

TEACHING TIP

Form groups of students and give each group a deck of randomly shuffled cards. Time groups to see which one can put the deck of cards in order the fastest. When they are finished, ask the group how they sorted the cards. Did they divide roles, i.e., were some group members in charge of face cards while others were in charge of numbered cards? Did they sort according to colors first and then suits? Congratulate them on their strategies and point out to them that this is an example of the problem solving strategy that they read about in **Learn**.

HOME-SCHOOL CONNECTION

Work values: cooperation

Have students talk to family members about cooperation at home and at work. Students can ask parents about their jobs, for example, or they might discuss how family members share different chores and responsibilities at home. Invite students to share what they learned with the class.

EXPLORE

AIM: To apply problem solving skills that were introduced through the reading passage in Learn.

TIME: 7–10 minutes

- This activity promotes the value of cooperation and problem solving skills. Guide students through the following steps so that they can practice the problem solving skills that they read about in **Learn**.
    1. Form groups of four. Assign one of the following tasks or problems to each group: Papers are not coming out of the printer during the printing process; the speakers are not working; the computer is having difficulty responding to user commands.
    2. Tell groups that they should break the problem down into smaller steps. Have them brainstorm all the things that need to be done and then to put the steps in order.
    3. Appoint one person to be the scribe. Have that person write a list of all the necessary steps.
    4. When they are finished, invite groups to share their lists with the class.

REVIEW

AIM: To check and consolidate the knowledge that students should have learned today.

TIME: 5–10 minutes

- Follow the steps for **Routine 15: Test a Partner.**
    1. Draw students' attention to **Review**. Explain that they are going to test each other on what they've learned in this lesson.
    2. Say Sit with a classmate, knee-to-knee. Discuss the questions in your book.
    3. Move around the classroom and monitor the students. Make notes on things that they've learned incorrectly (or they've forgotten) and things they've done well.
    4. Say Stop now. I want to review a few things with you. Clarify any misinformation.

SELF-ASSESS

AIM: To help students complete a truthful self-assessment and find the assistance they need to further develop.

TIME: to be completed at home

- Follow the steps for **Routine 18: Promise!**
    1. Draw students' attention to **Self-Assess**. Read the first instruction aloud and point to the I can… boxes.
    2. Say Think about how well you can do each Objective. You have three choices: I can do it very well. I can do it OK, and I need more work. Check the correct box at home.
    3. Remind students to be serious!
    4. Say After you've completed the self-assessment, write a promise. Complete the sentence: In the next lesson, I'm going to try to ...

OPTIONAL: Elicit some ideas from students and write them on the board, e.g.: *I'm going to... learn how to explain the steps involved in problem solving, discuss how to break down problems into smaller sections,* etc.

5. Praise students for their efforts.

<table>
<tr><th colspan="6">Teaching support for an integrated classroom</th></tr>
<tr><th>Intellectual disability and slow learning</th><th>Autism</th><th>Hearing impairment</th><th>Learning disability</th><th>Motor disability and cerebral palsy</th><th>Blind and weak sighted</th></tr>
<tr><td colspan="3">- Writing the steps followed to solve problems in short organized sentences and highlighting them on the board or presenting them in a mind map for the integrated categories.</td><td></td><td rowspan="2">- Supporting students by asking their classmates to help them write.
- Making their responses simpler, they could be oral responses, signs or hand gestures, or answers via a computer, if possible.
- Including them in groups and giving them tasks according to their disabilities.</td><td rowspan="2"></td></tr>
<tr><td colspan="4">- Highlighting the main vocabulary in the lesson (like digital tools, PowerPoint®, Word®, and Publisher®), writing them on the board and underlining them or drawing a box around them in the Student's Book.</td></tr>
</table>

LESSON 2 pp. 52–53



COMPREHENSION

AIM: To help students practice problem solving in real-life situations.

TIME: 7–10 minutes

1 Read and answer

1. Read aloud the directions and the numbered steps. Tell students that they will work together in pairs to respond to the prompts.
2. Have partners talk about each prompt and then write down their responses in the spaces provided.
3. When students are finished, call on pairs of students to read aloud their written responses to each prompt. Provide feedback as necessary. (Suggested answers: **1. The steps show trial and error because they show how the student tried different methods until he or she found one that finally worked. 2. Answers will vary, but students should tell about a time when they tried solving a problem in a variety of different ways until they found an approach that worked. 3. Trial and error is an important element to problem solving because in real life there often isn't just one solution. In many situations you have try solving a problem or completing a task using different approaches.**)

AIM: To practice troubleshooting a problem by putting steps in a logical order.

TIME: 5–7 minutes

2 Think and answer

1. Read the directions aloud and then form small groups of students. Tell groups to put the steps in the correct order.
2. Invite the first group that has finished the task to share their list with the class. If they haven't put the steps in the correct order, invite the next group that finishes their list to share with the class, and so on, until the steps have been put in the correct order. (Answer: **1. Turn on your computer. 2. Open Microsoft Word. 3. Type a few letters on a Word page. 4. Make sure your keyboard is well connected. 5. Try connecting another keyboard if available. 6. Ask your teacher for help to solve the problem.**)



LESSON 2 Problem-solving skills

Comprehension

1 Read and answer

Answer the questions.



Problem: Writing a research paper/report on a school subject.

Think of different ways to perform the task at hand.

1. Do you have a computer at home? No
2. Does the school have a computer? Yes
3. Can you use a word processor program? Yes
4. Can you format sentences on the Word writing program? No
5. Do you have some papers and colored pencils in your school bag? Yes
6. Can you use paper and colored pencils to write the research? Yes

1. Explain how the steps above show trial and error.

____

2. Write about a time you used trial and error to solve a problem.

____

3. Why do you think trial and error is an important element to problem-solving?

____

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AIM: To practice breaking a task down into smaller steps.

TIME: 4–6 minutes

3 Think and write

1. Read the directions aloud. Ask students to write down three or four steps that they would follow if they were going to make plans with a friend to see a movie.
2. Have students work independently. Circulate as they work to provide help with spelling and sentence formation as necessary.
3. When students are finished, call on volunteers to share their work with the class. Provide feedback if steps are missing or not in a logical order. (Suggested answers: **1. Choose a movie; 2. Find the best time; 3. Ask parents for a ride to the cinema.**)

2 **Think and answer**

Look at the steps below. Put them in order.

Problem: Microsoft Word is not responding and you want to know why.

- Make sure your keyboard is well connected.
- Turn on your computer.
- Ask your teacher for help to solve the problem.
- Type a few letters on a Word page.
- Open Microsoft Word.
- Try connecting another keyboard, if available.

Compare with a partner. Do you have the steps in the same order?

3 **Think and write**

You and your friend want to see a movie. Make plans.

Collaboration

4 **Read, discuss, and write**

Work with a partner. Think of an everyday task that you both do. Break the task down into steps. Below are some examples (or choose your own):

- Getting ready for school
- Making a meal
- Doing laundry

ICT and me

5 **Think and answer**

Think about a common ICT problem that you have already solved. Break down the steps you took to solve it. Use an example from below, or come up with your own.

- Your device slows down
- You don't have an internet connection

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COLLABORATION

AIM: To practice breaking a variety of tasks down into smaller steps.

TIME: 4–6 minutes

4 Read, discuss, and write

1. Tell students they will work in pairs. Read the directions aloud and verify that students understand the task.
2. Form pairs of students. Have partners choose one of the tasks and then break it down into steps. Remind them to write the steps down in the space provided.
3. Call on each pair to share their list with the class. Provide feedback if the steps are not presented in an orderly way.

ICT AND ME

AIM: To write an orderly list of steps involved in solving a common ICT problem.

TIME: 5–7 minutes

5 Think and answer

1. Read aloud the directions. Make sure that students understand the task.
2. Have students work independently in completing the form.
3. When they are finished writing their list of steps, have students form small groups so that they can share their ideas with other group members. Circulate as groups discuss and provide affirmative feedback.

EXTENSION ACTIVITIES

1. Do a pantomime activity with students in which you give directions for an activity while students act them out. You might say, e.g., We are going to make an omelette. First, chop the vegetables. Then put the vegetables in a skillet. After that I want you to break the eggs over a bowl. Now beat the eggs, etc. Afterward, you can switch roles by inviting volunteers to take turns coming up to the front of the class and "giving orders" for a task that you and the rest of the class have to act out.
2. Here is an art activity you can use to give students extra practice giving and following directions. Form pairs of students. Have one student sit with his or her back to the board, while the other student sits facing the board. Distribute drawing paper and crayons or markers to the students with their back to the board. Then, draw a picture on the board. It can be an abstract design with overlapping squares, triangles, and circles, or it can be a flower arrangement. Tell the students facing the board to guide their partners in drawing the object step-by-step, in a logical order. When they are finished, the "artists" can check their work by turning around and looking at the object on the board.

LESSON 3 pp. 54–55

Presenting information to others

OBJECTIVES
- Discuss how to best present information to others.
- Explain the necessary digital needs of simple projects.
- Discuss basic design concepts.

LIFE SKILLS
- Learning to do: decision making
- Learning to be: sharing

VALUES
- Academic values: curiosity

ISSUES AND CHALLENGES
- Environment and developmental issues: environmental pollution; sustainable development

MATERIALS NEEDED
- Art supplies: butcher paper, poster board, or drawing paper; pencils, crayons, or markers (Explore, Teaching Tip, Comprehension, Research)
- Computer connected to smartboard (Teaching Tip, Research)
- Magazines (Research, Extension Activities)

LESSON 3 Presenting information to others

Objectives

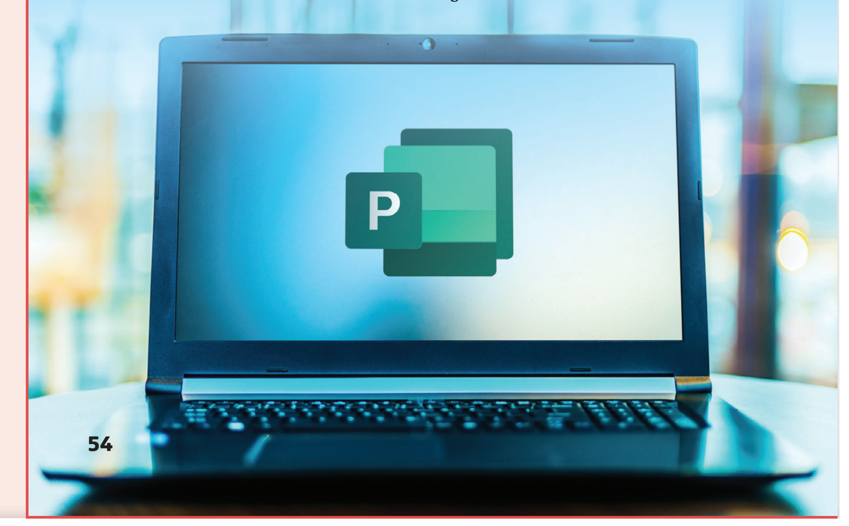
By the end of the lesson, I will be able to:	After the lesson, check the correct box: **I can . . .**		
• Discuss how to best present information to others.	Very well	OK	Need more work
• Explain the necessary digital needs of simple projects.	Very well	OK	Need more work
• Discuss basic design concepts.	Very well	OK	Need more work

Engage
Think about presentations your teachers and classmates have given in class. Was there one you particularly enjoyed? What kept you interested? Think about the visuals (written texts, still pictures, animation and videos).

Learn
Presenting information: digital tools

When you are presenting information, think about the digital tools you will need to best present it. For example, let's say you've been asked to create a digital poster or billboard. You will need to use software that will allow you to create it. Microsoft 365 includes different options to choose from: PowerPoint®, Word®, and Publisher®.

To access Microsoft 365's bundle, you will need to have a digital device that supports the software. You will have to be sure to update your computer to make sure it can handle the software being downloaded.



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OBJECTIVES

AIM: To encourage students' interest in the lesson objectives and content.

TIME: 2–3 minutes

- Follow the steps for **Routine 2: What Do I Need to Do?**
    1. Draw students' attention to the Lesson topic. Say This lesson we're going to learn how to present information to others.
    2. Read the objectives aloud to the class. Optional: Ask: Which objectives can you already do? Elicit some ideas.
    3. Ask What kind of things will we need to pay attention to during the theme?
    4. Elicit ideas from the students, e.g., **I need to pay attention to dates and times!**
    5. Write students' ideas on the board and remind students to pay attention to them during the lesson.

ENGAGE

AIM: To enable students to participate confidently and collaboratively in a class discussion that leads to the objectives of the lesson.

TIME: 2–5 minutes

- This activity explores the life skill of sharing.
- Follow the steps for **Routine 4: Think-Pair-Share.**

OPTIONAL: To encourage more discussion, ask follow-up questions: Have you ever given a presentation? What was it about? Did you use slides or any other visuals? etc.

LEARN

AIM: To activate students' background schema and encourage them to anticipate the content so they can build context before reading.

TIME: 2–5 minutes

- The reading gives tips and strategies on how to give presentations.
- Follow the steps for **Routine 6: Preview.**
  1. Say Previewing an article before you read can help you build context. You will have an idea of what the article is about before you even start reading. It's a good habit to get into because it will help you understand and remember what you read.
  2. Read aloud the first sentence. Tell students that the first sentence of a reading passage is called a "topic statement." It gives the main idea of the article and the ideas or information that will be covered.
  3. Direct students' attention to the subheads. Say Subheads also give clues about the ideas and information that will be covered. Based on the subheads you see here, what do you think the article is about? Listen to student responses and provide feedback that helps them focus on the idea suggested by the subheads.
  4. Tell students to keep their guesses in mind as they read the article. When they finish, ask if their guesses were correct.

OPTIONAL: Write guesses (both correct and incorrect) on the board. Refer to them during the lesson, i.e., Fatima guessed we would learn about color and design. She was right!

Digital concepts to consider

When creating your poster or billboard, think about the following digital concepts:

Margins

A margin is the space left around the edges of your poster or billboard. It's important not to crowd the edge of a poster or billboard. If you include content too close to the edge, it will appear cramped. This is not visually appealing and can overwhelm the viewer. A 25mm margin will help design a good poster.

Font size and type

You want your audience to be able to easily see your information. If you choose a small font size, your audience will have to strain to read the information. If you choose a font size that's too big, you'll have to limit the amount of information. Always be sure to choose a font size that is easy to read. There are many fonts you can choose, so consider the audience for your project. Sometimes, simple is better. A complicated or decorative font is distracting and hard to read.

Colors

Choose colors that get your message across. Consider using bold colors for information you want to emphasize. Choose color combinations that match.
Hint: it is better not to use more than 3 colors in a poster, and take into consideration the color of the background when choosing the font color.

Images

It's common to use images on posters or billboards. They should also make sense in terms of the content you are sharing. Use clear, good-quality, and appropriate images.

Explore

Pick a topic that you would like to learn about and present to others. Choose from the topics below or think of your own:

- Wildlife conservation
- Water conservation
- Reducing pollution in your community
- The importance of tourism in achieving mutual understanding and respect between peoples and societies

Plan how you may present this information to others using a poster or billboard. Think about the basic design concepts you would use, and your digital needs. Share your ideas with a partner.

Review

1. What are the tools needed to create a poster or billboard?
2. Of all the design concepts you learned in this lesson, which one do you think is most important? Why?

Self-assess

Go to the Objectives at the beginning of the lesson.
Check the correct I can . . . box.

55

BE THE EXPERT

There are many schools of design, each with its own list of basic principles. Perhaps the most fundamental list of guiding principles can be expressed as: typography, hierarchy, and color. Typography has to do with the style, or font, of printed words. In an informative presentation, ease of reading is important, especially when it comes to blocks of text. The next principle, hierarchy, has to do with the way that text is styled to show its importance. Titles should be larger than subheads, for example, and subheads should be larger than the rest of the text. Last but not least is the role of color. In general, colors should either be variations on the same hue or shade, analogous (next to each other on a color wheel), or matching (opposite each other on a color wheel).

TEACHING TIP

Have the class help you create a color wheel. (You can easily find an example by doing a search on an internet browser.) Project the color wheel on a smartboard, then have the students gather round a large sheet of butcher paper or poster board. Help them draw the wheel and its 12 segments. Have students color and label each color. You can then display the color wheel on the wall for reference as students complete various assignments and projects throughout the theme.

HOME-SCHOOL CONNECTION

Academic values: curiosity

Have students talk to family members about the importance of natural resources and conservation in the communities where they live. They can talk together about the quality of water in their neighborhood, for example, and where the water comes from.

EXPLORE

AIM: To prepare for a presentation on a topic related to environmental conservation and sustainable development.

TIME: 7–10 minutes

- This activity promotes the life skills of sharing and decision making, while also promoting the exploration of environmental issues. Guide students through the following steps so that they can apply these values and skills in the context of an informational presentation.
  1. Have students choose one of the environmental topics listed that they would like to learn about and present to others.
  2. Guide students in planning how they would present this information using a poster or billboard. They can draw an outline of the billboard, for example, with squares and rough sketches indicating where they want to include visuals and blank lines showing where they would include text.
  3. When students are finished, have them share their ideas with a partner. Encourage students to give each other feedback. Ask them to say which parts of the design they like and which parts they think could be improved.
  4. Tell students to put their sketches and outlines in a safe place, as they will use some of these ideas to plan and present a PowerPoint® presentation later in the theme.

REVIEW

AIM: To check and consolidate the knowledge that students should have learned today.

TIME: to be completed at home

- Follow the steps for **Routine 16: Family Test.**
  1. Draw students' attention to **Review**.
  2. Say You're going to ask a family member to test you on your knowledge.
  3. Say First, you are going to copy some questions on a piece of paper. Later on today, someone in your family will ask you the questions. Tell them everything you know!
  4. Have students copy the **Review** questions to take home so that family members can test them.
  5. When students return to class, follow up by asking them: Based on what you've learned so far, has your answer to the Engage question changed? How?

SELF-ASSESS

AIM: To help students complete a truthful self-assessment and find the assistance they need to further develop; to encourage critical thinking.

TIME: to be completed at home

- Follow the steps for **Routine 17: 3-2-1**

LESSON 3 pp. 56–57



COMPREHENSION

AIM: To help students apply the principles of graphic design that they have learned about.

TIME: 2–3 minutes

1 Look and answer

1. Read aloud the directions and direct students' attention to the two posters. Ask them to check the box of the poster that presents information more effectively.
2. Ask students which box they checked and invite them to share their reasoning. Tell students they will have an opportunity to write about their reaction in the next activity.

AIM: To evaluate the design and layout of a poster with text and images.

TIME: 5–7 minutes

2 Think and write

1. Read aloud the directions and the prompts. Tell students to write down their ideas in the space provided.
2. Invite one or two volunteers to read aloud their responses. Summarize by explaining for the class why the first poster is the one that's designed more effectively: The first poster is well designed for several reasons. For one thing, there is a central image that is easy to see, and it has depth to it. There is a banner across the top that shows what the poster is about, and the text at the bottom gives more specific information. The second poster, on the other hand, puts all the text in the middle, and some of it is too dark to see. I would lighten the image and cut the text to be more succinct.

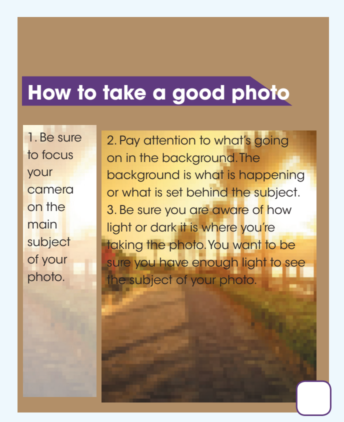
Learn by doing **LESSON 3** Presenting information to others

Comprehension

1 Look and answer

Look at the posters. Which one presents information more effectively? Check the box.





2 Think and write

Answer the questions.

1. Explain how the poster you checked above presents information effectively.

2. Explain how the other poster didn't present information effectively. What would you do to improve it?

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Research

3 Take notes

Create a poster. Find three facts about the topic you chose from page 55. You will include these facts on your poster. Write the facts below, and cite your sources.

4 Communicate through images

1. Write about how you can use images to make your poster more appealing.

2. Think about images to include on your poster. Write a description of each image below. Reminder: If you're including images you researched, be sure to cite your sources.

5 Create your poster

Don't forget to consider margins, font size and type, use of color, and images when creating your poster.

57

RESEARCH

AIM: To plan the text for a poster related to an environmental theme.

TIME: 5–7 minutes

3 Take notes

1. Read the directions aloud, reminding students to refer to the notes they took for the **Explore** activity on page 55.
2. In the space provided, have students write down the facts they intend to include in their poster. Encourage them to use action verbs such as *Conserve*, *Protect*, and *Reduce*.
3. Remind students to cite their sources.

AIM: To plan the design for a poster related to an environmental theme.

TIME: 4–6 minutes

4 Communicate through images

1. Read the directions aloud. In the space provided, have students take notes on the design of their poster.
2. Invite volunteers to read their responses aloud to the class. Provide feedback as appropriate, praising students for their creativity and effort.

AIM: To design and create a thematic poster.

TIME: 4–6 minutes

5 Create your poster

1. Distribute crayons, pencils, and markers. Have students design and create their poster in the space provided.
2. Circulate while students work, providing assistance and encouragement as appropriate.
3. When students are finished, give them time to share their creations in small groups. Encourage them to explain the ideas behind the design and layout of their poster.

EXTENSION ACTIVITIES

1. Bring in a collection of magazines. Have students gather around as you flip through the pages and talk about the design and layout. Draw their attention to the typography (font, size, and style of the text) and the graphics. Encourage students to evaluate the strengths and weaknesses of the layout, especially in terms of how the images interact with the text.
2. If time permits, have students replicate the posters they designed on full-sized sheets of art paper. Hang the posters on the wall, and then organize an exhibition in which students take turns telling the class about their poster, the message they want to convey, and how the poster is designed.

LESSON 4 pp. 58–59

Digital applications

OBJECTIVES

- Explain how to use reliable sources to conduct a search for information.
- Explain some uses and features of Word and Excel.
- Explain how to use Microsoft Word and Excel to present and share information.

LIFE SKILLS

- Learning to know: critical thinking; creativity

VALUES

- Personal values: independence

ISSUES AND CHALLENGES

- Globalization issues: technological awareness

MATERIALS NEEDED

- Art supplies: butcher paper, poster board, or drawing paper; pencils, crayons, or markers (Learn, Teaching Tip)
- Computer connected to smartboard (Critical thinking, Research)

LESSON 4 Digital applications

Objectives

By the end of the lesson, I will be able to:	After the lesson, check the correct box: **I can . . .**		
• Explain how to use reliable sources to conduct a search for information.	Very well	OK	Need more work
• Explain some uses and features of Word and Excel.	Very well	OK	Need more work
• Explain how to use Microsoft Word and Excel to present and share information	Very well	OK	Need more work

Engage

What impact does human behaviour have on the environment? What animals and plants are impacted in your area by human behaviour?

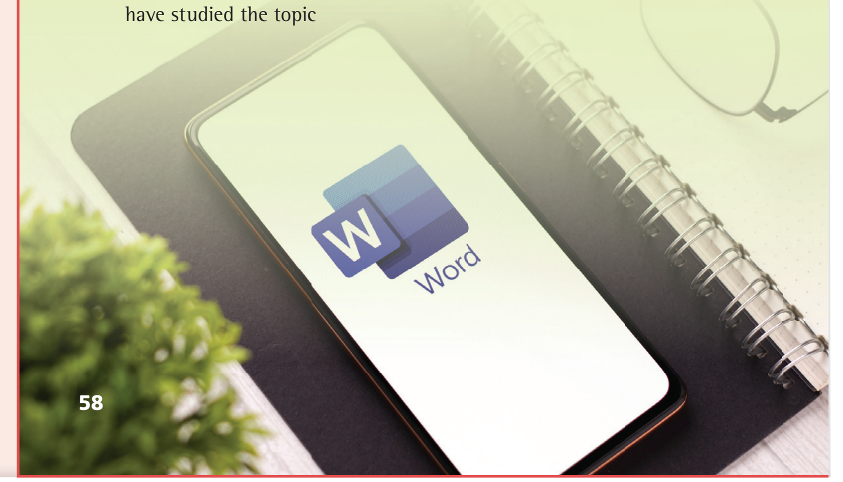
Learn

Evaluating sources

Humans can have a positive or negative impact on the plants and animals around them. We can have a massive effect on their environment and whether they can survive in an area. This is your chance to be an explorer! The first thing an explorer does is to research the topic.

When you research you need to use a variety of sources. These include:

- **Print:** books, articles, newspapers, encyclopaedias
- **The Internet:** a search engine, specialised websites, e-learning sites, the EKB and similar authoritative online sources
- **Interviews:** with people who have experience of, are affected by, or who have studied the topic



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OBJECTIVES

AIM: To ensure that students understand the objectives of the lesson.

TIME: 2–3 minutes

- Follow the steps for **Routine 3: Understanding Objectives.**
  1. Draw students' attention to the Lesson topic. Say To meet the objectives of a lesson, it's a good idea to make sure that you understand what the objectives are actually saying.
  2. Read the objectives aloud to the class.
  3. Ask Are there any words or phrases in the objectives that you don't understand? What are they?
  4. Explain any unfamiliar terms or vocabulary. Some students, for example, may be unfamiliar with the names of the software programs Word and Excel. Explain Word helps you create documents, or word files. With Excel, you can create spreadsheets that help you keep track of large amounts of data.
  5. Remind students that they will check the I can… boxes after completing the lesson.

ENGAGE

Aim: To enable students to participate confidently and collaboratively in a class discussion that leads to the objectives of the lesson.

TIME: 2–5 minutes

- This activity explores critical thinking skills and creativity.
- Follow the steps for **Routine 4: Think-Pair-Share.**

OPTIONAL: To encourage more discussion, ask follow-up questions: What do you know about Microsoft Word? Have you ever used Excel? What features make these programs really useful? etc. End by telling students they will learn more about these two programs in the **Learn** section.

LEARN

AIM: To take notes while reading to self-monitor comprehension.

TIME: 10–12 minutes

- The reading gives directions on how to use Microsoft Word and Excel.
- Follow the steps for **Routine 8: Taking Notes.**
    1. Say Taking notes while you read is a good way to make sure you are following the text. Look out for big ideas and words you don't understand. Use a pencil to draw a line under the most important words. Or you can circle them. Another way is to use a highlighter. If you don't understand something, look it up in a dictionary. You can also ask me if you need help. Then write the word's meaning in the margin.
    2. Have students read the text and take notes as directed.
    3. When they are finished, remind students that taking notes while reading is a good skill to develop, but before doing so they should make sure it's OK to write in the material provided to them.

<table>
<tr><th colspan="6">Teaching support for an integrated classroom</th></tr>
<tr><th>Intellectual disability and slow learning</th><th>Autism</th><th>Hearing impairment</th><th>Learning disability</th><th>Motor disability and cerebral palsy</th><th>Blind and weak sighted</th></tr>
<tr><td colspan="4">- Highlighting the main vocabulary in the lesson (like print, internet, interviews, Word®, and Excel®).
- Using demonstration while presenting Word®, and Excel® programs.</td><td>- Supporting students by asking their classmates to help them write.
- Making their responses simpler, they could be oral responses, signs or hand gestures, or answers via a computer, if possible.
- Including them in groups and giving them tasks according to their disabilities.</td><td>Using the screen reader to display Word®, and Excel® programs.</td></tr>
</table>

As you are gathering information it is important to evaluate the source of the information. The source will tell you how reliable the information is and if you can trust the information is true. There are many ways to evaluate the source. These include:

- Is the author a respected person or organization?
- Does the source provide evidence and cite other sources of information you can check?
- How current is the information?
- Does the source state opinions or facts?
- Is the information presented with a bias or unbiased?

You can ask your teacher or a member of your family for help.

Using Microsoft Word and Microsoft Excel

To record the data you collected you will need one program that is common in collecting information is Excel. Excel allows you to create a spreadsheet with as many columns and rows as you need. Excel is often used to present numbers as the program can add up numbers automatically. Excel is a wonderful way to collect information to collect your ideas.



Another key program you will need is Word. Word allows you to present your ideas in a variety of ways. Word is most commonly used to write out what you want, but you can do so much more! You can change the design, add photos, and link your report to websites or information online.

Explore

What is your favourite plant and animal? How do people help and hurt these plants and animals? Work with a group to determine the kind of information you should find about these plants and animals and how to record the information.

Review

1. Compare how you might collect information using Excel and share the information using Word. You can use the "Guide to..." page 82 to help you.
2. What are some reliable sources of information you can use to find information about the plants and animals that live in your area and how people impact their environment?

Self-assess

Go to the Objectives at the beginning of the lesson.
Check the correct I can . . . box.

59

BE THE EXPERT

Though Word and Excel are both software programs that were developed by Microsoft, they differ in ways that can be confusing to users. If you are less than proficient in either of these programs, you can easily find online tutorials that will help you learn how to create your own word files and spreadsheets. On YouTube®, for example, do a search for "how to use Microsoft Word" or "how to use Excel." You will find a variety of clips on different aspects of both programs.

TEACHING TIP

Have the class help you create two charts: one for commands that can be used with Microsoft Word, and another one that can be used with Excel. When finished, you can display the charts in the classroom for reference. For example, Ctrl + A in Word (Cmd + A on a Mac) selects the contents of the document, and Ctrl + S (or Cmd + S on a Mac) saves the document in both Word and Excel.

HOME-SCHOOL CONNECTION

Personal values: independence

Have students talk to family members about software programs and applications that they use. Some family members may use programs, for example, that are customized for their place of work. Invite students to share what they learned with the class.

EXPLORE

AIM: To explore ideas and information that were introduced through the reading passage in **Learn**.

TIME: 7–10 minutes

- This activity helps students acquire the skills that they will need to work independently, while also promoting technological awareness.
- Follow the steps for **Routine 12: Time for a Discussion!**

REVIEW

AIM: To check and consolidate the knowledge that students should have learned today.

TIME: to be completed at home

- Follow the steps for **Routine 16: Family Test.**
  1. Draw students' attention to **Review**.
  2. Say You are going to ask a family member to test you on your knowledge.
  3. Say First, you are going to write some questions on a piece of paper. Later on today, someone in your family will ask you the questions. Tell them everything you know!
  4. Have students write the review questions to take home so that family members can test them.
  5. When students return to class, follow up by asking them: Based on what you've learned so far, have your answers to the Engage question changed? In what way?

SELF-ASSESS

AIM: To help students complete a truthful self-assessment and find the assistance they need to further develop; to encourage critical thinking.

TIME: to be completed at home

- Follow the steps for **Routine 18: Promise!**

LESSON 4 pp. 60–61



CRITICAL THINKING

AIM: To evaluate the reliability of various online sources.

TIME: 2–3 minutes

1 Read, think, and write

1. Read aloud the directions and model the first entry in the left-hand column for students. Say: I am going to list the Britannica Digital Learning as one source of information. We know, for example, that this is part of the Egyptian Knowledge Bank.
2. Direct students' attention to the ranking system described at the bottom of the page and read it aloud. Ask: How would you rank this source? Is it a Trusted Source, a Questionable Source, or an Untrusted Source? Discuss students' evaluations as a class.
3. Form small groups of students of mixed proficiency levels to complete the remaining four entries on the chart and evaluate each one.
4. Reconvene the class and invite students to share their comments. Summarize by saying: A trusted source is an expert in its field, provides accurate and up-to-date information, and cites its sources. A questionable source offers some sources but also mixes opinions with its facts. A untrusted source does not cite sources and uses mostly opinions with few facts. As a class, discuss examples each group has provided for each type of source.

Learn by doing **LESSON 4** Digital applications

Critical Thinking

1 Read, think, and write

Where can you find information about plants and animals where you live? Use the first column below to record 5 sources of information.

Source of information	How reliable is the source

Now look at those sources of information and evaluate how reliable they are. Use the below ranking as a guide.

* * * **Trusted source:** The information comes from a reliable person or organization that cites sources and states current facts.

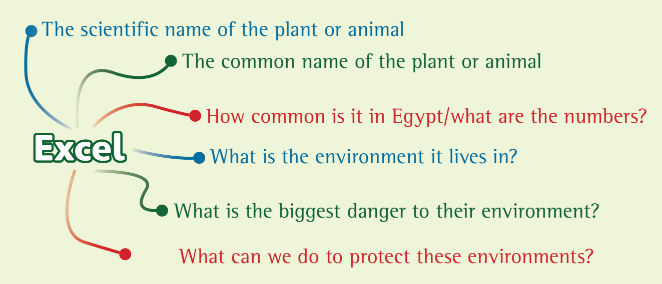
* * **Questionable source:** The information comes from a person or organization that offers some sources but sometimes states their opinion intermixed with facts.

* **Untrusted source:** The information comes from a person or organization that does not have sources to back up what they are saying and uses mostly opinions with little facts.

Research

2 Think and answer

1. Use Excel to collect the data from the sources you found. You will want to collect the following data:



Present

3 Think and answer

1. Look at the information you found in your Excel document. What is the most surprising information? What is the most important information for others to know?

2. Use a Word document to present your finding. Remember to use the margins, font size, colors, and images to better get your message across to others.

margins colors
font size Word images

61

RESEARCH

AIM: To learn how to gather and organize data on an Excel spreadsheet.

TIME: 5–7 minutes

2 Think and answer

1. Tell students that the next activity will guide them through the the kind of data they will want to record and how to organize it on an Excel spreadsheet. Display the chart you created with common commands for Word and Excel for student reference.
2. Read the directions aloud. Then have student volunteers read each category of data listed in the graphic.
3. Project an Excel spreadsheet on a smartboard. Then, using the common commands listed on the chart, write the header for each category of data in each column. (Suggested headers: **Plant or Animal in Column A; Scientific Name in Column B, Common Name in Column C; Population in Column D; Environment or Habitat in Column E; Danger to Environment in Column F; How to Protect Environment in Column G.**)
4. Together, as a class, complete one row of the chart for a plant or animal of the students' choice. Demonstrate how to adjust columns widths, how to wrap text, and other useful features of Excel.
5. Have students reconvene in the small groups they formed earlier, and have them select a plant or animal to research. Check to be sure there is no duplication and that both plants and animals are explored.

PRESENT

AIM: To reflect on the information gathered and present it as a report using Word.

TIME: 4–6 minutes

3 Think and answer

1. Read the directions for Activity 1 aloud. In the space provided, have students jot down their thoughts about what was most surprising and what was most informative from among the data they gathered.
2. Invite volunteers to read their responses aloud to the class. Provide feedback as appropriate, praising students for their insights and effort.
3. Finally, have student groups use the data from their spreadsheets to write reports, or informational essays, about the plant or animal they researched. Encourage the use of design elements to add impact to their message. Consider compiling a scrapbook of students' reports.

EXTENSION ACTIVITIES

1. Throughout the year, as students visit a variety of different websites, have them evaluate how reliable they are as sources of information. Tell them to keep in mind such factors as: the credentials and credibility of the author; the reputation of the publisher or host; and how recent the information is. With students, create a chart to display in class with two columns: reliable sources and unreliable sources. They can refer to this whenever doing their own research.

LESSON 5 pp. 62–63

Algorithms

OBJECTIVES

- Discuss the concept of algorithms.
- Explain how a search engine uses algorithms.
- Explain how to solve a problem using an algorithm.

LIFE SKILLS

- Learning to be: means of communication
- Learning to know: problem solving
- Learning to do: cooperation

VALUES

- Academic values: appreciation of mathematics

ISSUES AND CHALLENGES

- Globalization issues: digital citizenship

MATERIALS NEEDED

- Writing paper, pens, or pencils (Explore)
- Classroom computers (Research)
- Computer connected to a smartboard (Extension Activities)

LESSON 5 Algorithms

Objectives

By the end of the lesson, I will be able to:	After the lesson, check the correct box: I can . . .		
• Discuss the concept of algorithms.	Very well	OK	Need more work
• Explain how a search engine uses algorithms.	Very well	OK	Need more work
• Explain how to solve a problem using an algorithm.	Very well	OK	Need more work

Engage

How does following a process help you to solve a problem?

Learn

In Term 1, you learned how to use search engines to gather information online. Every time you type keywords into a search engine, the engine uses algorithms to provide results. Algorithms help it to decide which results will be more relevant to you. For example, if you are using a search engine to find directions to a place, it will use a database of names and information from digital maps to provide you the results.

An algorithm is a series of steps that explain how to do a task. When you make a meal, you follow a recipe – which is a type of algorithm! A recipe includes a set of instructions that will successfully lead you to making that meal. For example, read the recipe on the following page.



62

OBJECTIVES

AIM: Ensure that students understand the objectives of the lesson.

TIME: 2–3 minutes

- Follow the steps for **Routine 3: Understanding Objectives.** Remind students that they will check the I can… boxes after completing the lesson.

ENGAGE

AIM: To enable students to participate confidently and collaboratively in a class discussion that leads to the objectives of the lesson.

TIME: 2–5 minutes

- This activity explores skills having to do with critical thinking and problem solving.
- Follow the steps for **Routine 4: Think-Pair-Share.**

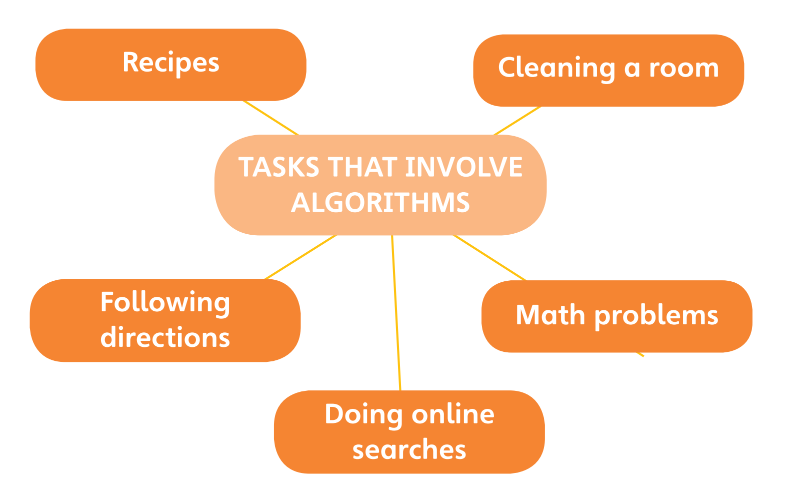
OPTIONAL: To encourage more discussion, ask follow-up questions: Think of a task that you recently completed at home or at school. What steps did you have to follow?

LEARN

AIM: To help students achieve the Objectives by organizing the new information they have learned.

TIME: 10–15 minutes

- The reading explains how algorithms are used to complete tasks and solve problems.
- Follow the steps for **Routine 9: Mind-Mapping.**
  1. Draw students' attention to the passage in Learn.
  2. Draw a big box in the center of the board and label it: *Tasks that involve algorithms.*
  3. Have students read the information in **Learn**. Pause at useful points in the text and add to the information in the Mind Map on the board. The aim is to visually organize what students learn about the topic. Example:



OPTIONAL: Have students copy the Mind Map in their notebooks.

Teaching support for an integrated classroom					
Intellectual disability and slow learning	**Autism**	**Hearing impairment**	**Learning disability**	**Motor disability and cerebral palsy**	**Blind and weak sighted**
- Writing the word (algorithms) on the board, highlighting it in the Student's Book and explaining it in a simplified and practical way. - Giving simple examples about algorithms from daily life.				- Supporting students by asking their classmates to help them write. - Making their responses simpler, they could be oral responses, signs or hand gestures, or answers via a computer, if possible. - Including them in groups and giving them tasks according to their disabilities.	

	How to make a falafel sandwich
1	Gather the ingredients to make your falafel sandwich.
2	Place pita bread on the plate.
3	Open the pita bread.
4	Place your desired amount of falafel balls into the pita bread.
5	Smash the falafel balls once they're inside the bread.
6	Add tahini and salad.

Many of the things you do each day can be described as algorithms, i.e. a series of steps. When you clean your room, this is an algorithm:

1. clean the dust → 2. wipe flat surfaces → 3. clean the floor

When you give directions, you are also using an algorithm:

1. go straight ahead → 2. turn right at 'x' → 3. turn left at 'y'.

When you are at school, you are often using algorithms to complete assignments. For example, when you do a word problem in math class, you will often have to break the question down. You will solve it in a series of steps. These steps are the guidelines needed to solve the problem.

Computers and applications use algorithms to perform specific tasks. When you input the keywords you are searching for, the search engine takes steps to provide results. If your wording is not specific enough, the engine's algorithm may not be entirely accurate.



Explore

Think of a task you perform on a routine basis. Create your own algorithm. Write the steps. Compare your algorithm with a partner.

Review

1. Explain how a search engine uses algorithms to provide results.
2. Lesson 5 introduced you to the concept of algorithms. Explain how, step by step.

Self-assess

Go to the Objectives at the beginning of the lesson. Check the correct I can . . . box.

63

BE THE EXPERT

The earliest algorithms appeared in the Babylonian mathematics of ancient Mesopotamia in what is now the country of Iraq. There is also evidence that algorithms were used in ancient Egypt and Hellenistic Greece as well. The most famous example is the Euclidean algorithm, which was first described in Euclid's Elements. This algorithm provides the steps to compute the greatest common divisor of two numbers, or the largest number that divides them both without a remainder.

TEACHING TIP

The mathematicians of ancient Egypt used a famous algorithm to solve different kinds of mathematical problems, including multiplication and fractions. Ask students to multiply I0 x I2, and then discuss the many different ways they can acheive the same answer.

HOME-SCHOOL CONNECTION

Life Skill: Learning to do: cooperation

Have students talk to family members about tasks they do at home. How are the tasks broken down into separate steps? Invite students to share what they learned with the class.

EXPLORE

AIM: To explore ideas and information that were introduced through the reading passage in **Learn**.

TIME: 7–10 minutes

- This activity helps to raise students' awareness of how algorithms are a part of daily life.
    1. Read aloud the directions. Then distribute writing paper and have students work independently in writing down the steps for a task that they do on a regular basis.
    2. When students are finished, have them share their work with a partner. Encourage them to give each other feedback, such as **I like the part where you said ___________. You might want to add a step about ___________.**

REVIEW

AIM: To check and consolidate the knowledge that students should have learned today.

TIME: 5–10 minutes

- Follow the steps for **Routine 15: Test a Partner.**

SELF-ASSESS

AIM: To help students complete a truthful self-assessment and find the assistance they need to further develop; to encourage critical thinking.

TIME: to be completed at home

- Follow the steps for **Routine 17: 3-2-1.**

LESSON 5 pp. 64–65



COMPREHENSION

AIM: To apply what students have learned about algorithms to tasks and routines from daily life.

TIME: 5–7 minutes

1 Look and answer

1. Read aloud the directions and then have students provide written responses in the spaces provided.
2. Remind students to look at Lesson 2, **Learn by Doing** to see some examples of daily tasks and routines. Alternatively, they can also look at the tasks they brainstormed in the **Learn** activity of this lesson.
3. Invite volunteers to share their responses with the class.

CRITICAL THINKING

AIM: To think through the steps involved in a computer software program or application that students know well.

TIME: 5–7 minutes

2 Think and write

1. Read aloud the directions and the example of how computers need algorithms to run.
2. Form pairs of students. Have partners work together in thinking of an additional example of how a computer, tablet, or cell phone uses steps in a program or application that they know well.
3. Have partners work together in writing their response to the prompt.
4. Call on partners to share their responses with the class. (Suggested answer: **Word receives keystrokes to execute different commands, like italicising text**.)

AIM: To write the steps in an algorithm in order to solve a problem.

TIME: 7–10 minutes

3 Solve the problem

1. Read aloud the directions and have students work in pairs or small groups in writing the steps necessary to solve the maze.



LESSON 5 Algorithms

Comprehension

1 Look and answer

Write at least one algorithm you used today in the following places:

1. At home: ______________________________

2. At school: ______________________________

Hint: Go back to Lesson 2, Learn by Doing, to see some examples of daily tasks and routines.

Critical Thinking

2 Think and write

Read the example of how computers need alogrithms to run. Then answer the questions.

Computers and applications need algorithms to run. For example, if you type "My name is Asma/Ahmed", the word processor:

- detects the key pressed for the first letter: is it a capital letter or a small letter?
- displays the letter on the screen
- repeats until end of word
- checks if this word is correctly spelled. If yes, it does nothing; if no, it indicates a possible mis-spelling
- repeats and continues to the end of the sentence

1. Give an example of the steps you think a computer, tablet, or mobile phone uses when you open a program or application you use regularly.

____

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2. When students are finished, call on groups to share their responses. Write each step on the board, providing feedback and making modifications as necessary so that students can check their work. (Suggested answers: **1. Enter maze. 2. Make a turn to the left or the right. Is there a dead end? If yes, turn around and go the other way. 3. Continue until you come to another turn. If one way is blocked, go the other way. If both ways are open, guess which way is best. 4. Repeat steps until you solve the maze.**)

2. How could missing a step, or adding incorrect information, affect an algorithm?

3 Solve the problem

Create an algorithm. Look at the maze. Provide the steps needed to go from Point A to Point B.

B

A

ICT and me

4 Think and answer

How can algorithms help you understand the processes of the search engine when searching on the internet?

Research

5 Search and evaluate

Use a search engine to research the topic of your choice from Lesson 3 p.55 Explore. Evaluate and take notes on the top three results of your search. Use your response to the ICT and me question above to help you.

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ICT AND ME

AIM: To think and write about how algorithms are used in search engines.

TIME: 4–6 minutes

4 Think and answer

1. Read the directions aloud. In the space provided, have students take notes on how algorithms are used in search engines. Encourage them to do this independently, but if you think some students may have difficulty responding on their own, pair them with a student at a more advanced level of proficiency.
2. When students are finished, have them refer to their responses while you lead a discussion about the steps that a search engine goes through. (Suggested answers: **1. The user enters a search term. 2. The search engine looks for web pages that contain the search term. 3. The search engine shows the user the web pages that come up most often when that term is used.**)

RESEARCH

AIM: To evaluate the effectiveness of different search terms.

TIME: 15–20 minutes

5 Search and evaluate

1. Read the directions aloud. Have students take turns using a classroom computer so that they can do an online search about the topic of their choice from Lesson 3 page 55.
2. Encourage students to take notes in the space provided while they do the search. If the top three results of their search do not yield results that are useful to them, then they should modify their search terms.

EXTENSION ACTIVITIES

1. If necessary, review the tips in Term 1, Unit 2, Lesson 4, for conducting online searches. Here are the key points: 1. Use phrases instead of single words. 2. Use quotation marks when you want matches for a specific phrase; example: “I love Cairo”.
2. Using a computer connected to a smartboard, practice doing more online searches with the class. View the results with students and discuss the results: Did the search term lead to useful results? How could the search term be improved?

LESSON 6 pp. 66–67

The principles of coding

OBJECTIVES
- Discuss the concept of coding.
- Explain what can be created using coding programs.
- Discuss how coding is another example of problem solving.

LIFE SKILLS
- Learning to know: creativity; problem solving

VALUES
- Academic values: appreciation of mathematics

ISSUES AND CHALLENGES
- Globalization issues: civilizational communication

MATERIALS NEEDED
- Graph paper; pencils (Explore, Extension Activities)

LESSON 6 The principles of coding

Objectives

By the end of the lesson, I will be able to:	After the lesson, check the correct box: **I can . . .**		
• Discuss the concept of coding.	Very well	OK	Need more work
• Explain what I can create using coding programs.	Very well	OK	Need more work
• Discuss how coding is another example of problem-solving.	Very well	OK	Need more work

Engage

What kinds of online animations, movies, or games interest you? Explain why.

Learn

Think about online animations and movies you have viewed, and online games you have played. They were created using coding.

Coding is the writing of multiple algorithms to make a complete program.

66

OBJECTIVES

AIM: To ensure that students understand the objectives of the lesson.

TIME: 2–3 minutes

- Follow the steps for **Routine 3: Understanding Objectives.** Remind students that they will check the I can… boxes after completing the lesson.

ENGAGE

AIM: To enable students to participate confidently and collaboratively in a class discussion that leads to the objectives of the lesson.

TIME: 2–5 minutes

- This activity explores skills having to do with critical thinking and problem solving.
- Follow the steps for **Routine 4: Think-Pair-Share.**

OPTIONAL: To encourage more discussion, ask follow-up questions: What's the difference between a good movie and a bad movie? What makes an online game really exciting? What makes it boring?

LEARN

AIM: To motivate students to read a long text; to enable students to achieve the lesson objectives.

TIME: 15–20 minutes

- The reading explains how coding consists of multiple algorithms that make a complete program.
- Follow the steps for **Routine 7: K-W-L Chart.**
- Tell students to keep their K-W-L chart. Encourage them to continue taking notes on their charts throughout the theme. At the end of the theme, students can refer back to their charts and see what they learned.

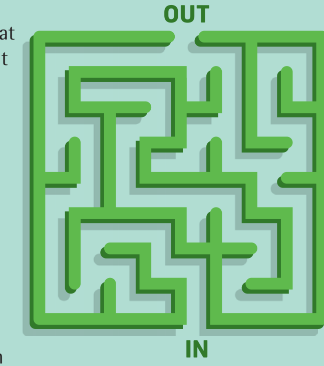
<table>
<tr><th colspan="6">Teaching support for an integrated classroom</th></tr>
<tr><th>Intellectual disability and slow learning</th><th>Autism</th><th>Hearing impairment</th><th>Learning disability</th><th>Motor disability and cerebral palsy</th><th>Blind and weak sighted</th></tr>
<tr><td colspan="4">- Highlighting the vocabulary (coding), writing it on the board and underlining it or drawing a box around it in the Student's Book.
- Giving a lot of simple examples to clarify the concept of coding.
- Before starting with the maze, defining the meaning of one distance, then 2 distances, then 3 distances using a simple model of a maze divided into equal squares.
- Starting with a simple maze of three steps, then gradually increase the steps to reach the number needed in the example in the school book.</td><td>- Supporting students by asking their classmates to help them write.
- Making their responses simpler, they could be oral responses, signs or hand gestures, or answers via a computer, if possible.
- Including them in groups and giving them tasks according to their disabilities.</td><td>- Giving a lot of simple examples to clarify the concept of coding.
- Before starting with the maze, defining the meaning of one distance, then 2 distances, then 3 distances using a simple 3D model of a maze divided into equal squares.
- Starting with a simple 3D maze of three steps, then gradually increase the steps to reach the number needed in the example in the school book.</td></tr>
</table>

You can create animations, movies, and games using code. Just like people, computers speak different languages.

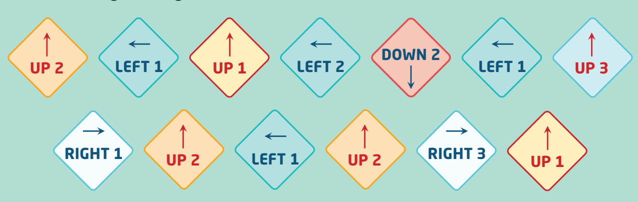
There are many websites like Code.org that can help you learn to code using different coding languages. What programming (coding) languages have you heard of?

Have you ever created a maze and provided instructions to solve it? Instructions for a maze are like instructions in computer programs. Look at the example below.

Think about the steps you can use to get through the maze. The steps contain the number of spaces to take, and in which direction. Follow the steps to get through the maze!



You can create mazes on Code.org. Mazes are just one example of things you can create using coding.



Explore
Make your own maze. Write instructions on how to complete it. Share your maze with a partner. Give them the instructions to solve it.

Review
1. What is coding?
2. Explain how coding is another example of problem-solving.

Self-assess
Go to the Objectives at the beginning of the lesson.
Check the correct I can . . . box.

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BE THE EXPERT

Code.org is a non-profit organization dedicated to providing students access to fun activities that are designed to build and enhance computer skills. Their website has been visited by millions of students from around the world. They also provide courses designed to provide professional development for instructors. Visit their website to find out more.

TEACHING TIP

Lead students in a simple dance routine (e.g., stand at center; step to the left; clap; back to center; hop; step to right; clap; back to center; hop). Invite students to take turns inventing other “dance codes” for the class to follow.

HOME-SCHOOL CONNECTION

Life Skill: Academic values: appreciation of mathematics

Send a note home with students, telling parents about Code.org, which has a link leading to activities that students can do at home. Encourage parents to visit the website with children and to complete one of the many activities available.

EXPLORE

AIM: To explore ideas and information that were introduced through the reading passage in Learn.

TIME: 7–10 minutes

- This activity helps to raise students' awareness of how coding is made up of multiple algorithms.
  1. Read aloud the directions. Then distribute graph paper and have students work independently in creating their own mazes.
  2. When students are finished, have them share their work with a partner. Encourage them to check each other's work by comparing their instructions for solving the maze and the maze itself.

REVIEW

AIM: To check and consolidate the knowledge that students should have learned today.

TIME: to be completed at home

- Follow the steps for **Routine 16: Family Test.**

SELF-ASSESS

AIM: To help students complete a truthful self-assessment and find the assistance they need to further develop; to encourage critical thinking.

TIME: to be completed at home

- Follow the steps for **Routine 18: Promise!**

LESSON 6 pp. 68–69



COMPREHENSION

AIM: To review concepts and terminology related to coding.

TIME: 5–7 minutes

1 Read and answer

1. Read aloud the directions and then have students work independently in numbering each of the bird's actions to show the correct sequence of events. (**1. Fly and look for a worm. 2. Locate a worm. 3. Pick up the worm. 4. Fly to the nest. 5. Stop flying. 6. Feed the worm to the baby bird.**)
2. Read aloud the question and, if necessary, have students go back to the **Learn** section on page 66 for help. (Confirm: **Coding is the process of writing computer programs.**) Have students write the definition in the space provided.
3. Read aloud the prompt and give students a few minutes to write down their ideas, then invite them to share what they wrote. (Possibilities include: **a computer program; a social media app; a game; a mathematical algorithm.**)

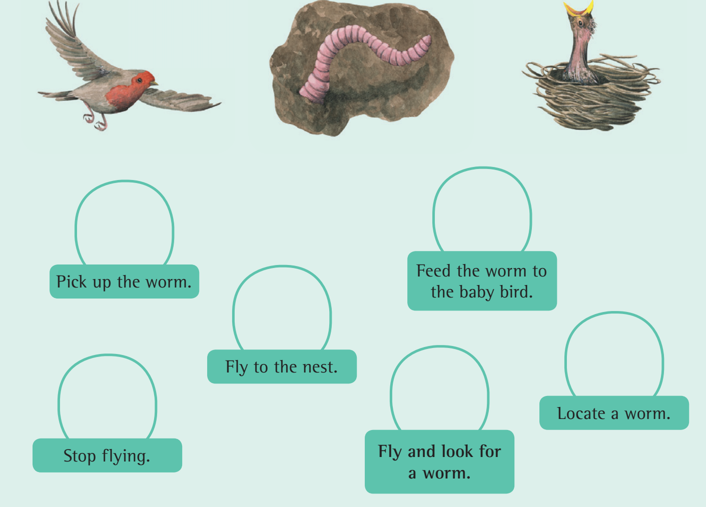


LESSON 6 The principles of coding

Comprehension

1 Read and answer

1. Order the steps to make the bird fly, pick up the worm, and take it to its nest.



2. What is coding? Go back to the Learn section on page 66 for help answering this question.

____
____
____

3. Explain what you can create through coding.

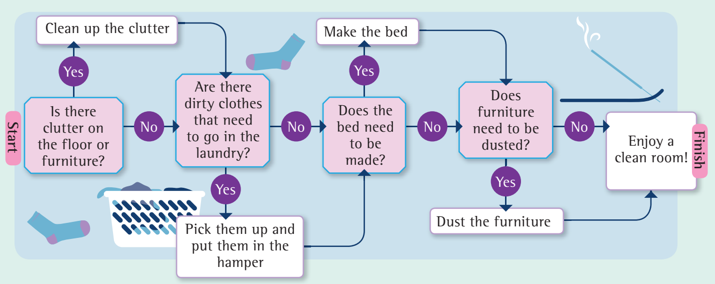
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Critical Thinking

2 Read and draw

1. Look at this flowchart. A flowchart is like coding in that it represents a problem in logical, simple steps.



2. Now draw another flowchart about another problem. Here are some ideas:
   - set the table
   - weed the garden
   - take out the garbage
   - organize your desk

3 Think and write

1. What are the similarities and differences between the coding in activities 1 and 2 above?

ICT and me

4 Think and answer

Think about the topic you've been researching since Lesson 3. How could you use coding, blocks, or a flowchart in a presentation about your topic of choice? Write and/or draw your ideas below.

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CRITICAL THINKING

AIM: To practice creating a flowchart.

TIME: 5–7 minutes

2 Read and draw

1. Read aloud the directions and draw students' attention to the flowchart. Help them see how responses to the *yes/no* questions lead to the next step in the chart.
2. Distribute drawing paper and markers, pens, or pencils. Have students draw their own flowcharts using one of the ideas shown or an idea of their own. When they are finished, invite students to share their flowcharts with the class.

AIM: To compare and contrast two different forms of coding.

TIME: 7–10 minutes

3 Think and write

1. Read aloud the directions and have students work independently in providing written responses to the question. If necessary, pair students at lower levels of proficiency with more advanced students.
2. When students are finished, invite volunteers to share their responses. (Possible answers: **Similarities: They show the order of events; They use a combination of words and pictures; They show how a task is completed. Differences: The one about the bird is more straightforward. It goes directly from one action to the next. The flowchart, on the other hand, is more complex. It shows alternatives or options. Depending on your answer to the question, you might go one way or you might go the other.**)

ICT AND ME

AIM: To brainstorm ideas related to a presentation.

TIME: 4–6 minutes

4 Think and answer

1. Read the directions aloud. In the space provided, have students take notes on how they could use coding, blocks, or a flowchart in a presentation about a topic of their choice. Circulate while students work, providing assistance as necessary.
2. When students are finished, have them share their ideas with a partner or in small groups.

EXTENSION ACTIVITIES

1. Have students help you create a flowchart for a decision-making process. Questions you can use to generate ideas include: *Should I post this online? Should I accept an invitation to a party? Should I cut my hair?* and so on. Use the question as a starting point, with *Yes* leading one way and *No* leading the other. Ask students to provide ideas for actions and subsequent questions. Continue in this way until the flowchart is done.

LESSON 7 pp. 70–71

Graphic art

OBJECTIVES

- Discuss how to use graphic programs.
- Discuss how to add some visuals (such as photos, illustrations, texts) to a presentation.
- Explain how to add and edit photos.

LIFE SKILLS

- Learn by knowing: critical thinking
- Learning to live together: participation; reviewing goals

VALUES

- Work values: perseverance

ISSUES AND CHALLENGES

- Globalization issues: technological awareness

MATERIALS NEEDED

- Computers with Paint®, Microsoft Word®, Microsoft Powerpoint®, or some other graphics editor software connected to a smartboard (Teaching Tip)

LESSON 7 Graphic art

Objectives

By the end of the lesson, I will be able to:	After the lesson, check the correct box: **I can . . .**		
• Discuss how to use graphic programs.	Very well	OK	Need more work
• Discuss how to add some visuals (such as photos, illustrations, texts) to a presentation.	Very well	OK	Need more work
• Explain how to add and edit photos.	Very well	OK	Need more work

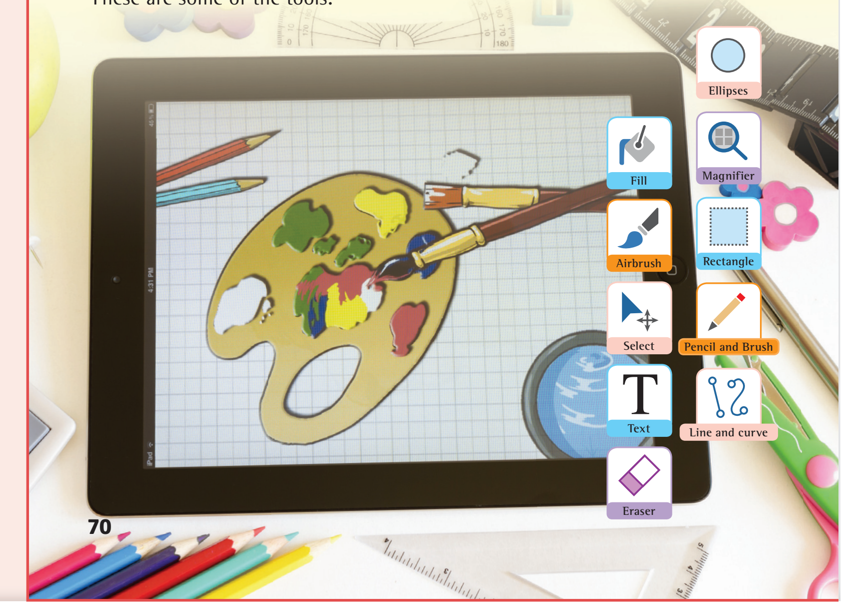
Engage

How do you think visual aids (like drawings and photos) can help a presentation?

Learn

It's easy to create your own drawings or edit images on computers. A popular graphics editor is Microsoft Paint. To open the file, click on Accessories in the Start-up menu. Find Paint and click on it. In Paint, you'll notice that the top of the screen is like Word and Excel. There's a menu bar and toolbox. The menu bar includes options for opening and saving files. The editing features on the menu bar include the ability to edit colors and images.

The toolbox includes all the tools that you will need to make your drawing. These are some of the tools:



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OBJECTIVES

AIM: To encourage students to take responsibility for their own learning needs and paths.

TIME: 2–3 minutes

- Follow the steps for **Routine 2: What Do I Need to Do?** Write students' ideas on the board and remind students to pay attention to them during the lesson.

ENGAGE

AIM: To engage students in a discussion that leads to a lesson objective or life skill; to use critical thinking to investigate clues in photos.

TIME: 2–5 minutes

- This activity explores skills having to do with critical thinking.
- Follow the steps for **Routine 5: Photo Detectives!** Revisit the **Engage** question after students have shared their observations about the photos.

LEARN

AIM: To take notes while reading to self-monitor comprehension.

TIME: 10–12 minutes

- The reading explains how graphic editors and graphic tools work.
- Follow the steps for **Routine 8: Taking Notes.**
- When they are finished, remind students that taking notes while reading is a good skill to develop, but before doing so they should make sure it's OK to write in the material provided to them.

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<tr><td colspan="4">- Highlighting the vocabulary (Paint, accessories, menu bar, toolbox), writing them on the board and underlining them or drawing a box around them in the Student's Book.
- Using demonstration while presenting Microsoft Paint®.</td><td>- Supporting students by asking their classmates to help them write.
- Making their responses simpler, they could be oral responses, signs or hand gestures, or answers via a computer, if possible.
- Including them in groups and giving them tasks according to their disabilities.</td><td>Using the screen reader to display Microsoft Paint®.</td></tr>
</table>

You can edit photos in Paint. You can:

- Fill colors using the color options.
- Select areas of the photo to use in your drawing by cropping.
- To add text to a photo, click on the bottom right corner of the photo. Drag your mouse to the right until you have enough white space to write your text. Cut and paste the text from the area and onto the photo.
- Change the size or direction of the photo.



Microsoft Word also offers graphic tools to create a graphic. Click on the Insert menu bar to see the different options, such as:

- Shape
- Icons
- 3D models
- Smart Art



Explore

Think about the research you've done on your topic of choice from Lesson 3. How could you use Microsoft Paint to make a presentation about your topic more appealing? Write your ideas and share them with a partner.

Review

1. What tools are used in Paint? Explain what they do.
2. What are the art projects (digital - handmade) you would be interested in designing?

Self-assess

Go to the Objectives at the beginning of the lesson.
Check the correct I can . . . box.

71

BE THE EXPERT

In addition to the software programs described in **Learn** (Microsoft Paint, Paint 3D), Adobe Photoshop is another software program that can be used to edit, combine, and manipulate images. Microsoft PowerPoint, which will be explored in more detail in Lesson 8, also has a number of tools you and students can use to create dynamic images and presentations.

TEACHING TIP

Give students a training session in one of the above-mentioned software programs. You can start by assigning small groups of students to a classroom computer that has the designated software. Then, using a computer connected to a smartboard, demonstrate how to use basic tools, and guide students in creating a simple sketch or a collage of images.

HOME-SCHOOL CONNECTION

Life Skill: Work values: perseverance; technological awareness

Send a note home with students, asking family members if they have any magazines that they can donate or loan to the class. Look at the magazines with the class, asking students how they think the images might have been altered or enhanced by a software program like the ones they have learned about in class.

EXPLORE

AIM: To lead this discussion/activity in a way to meet objectives while also linking into what students have learned so far.

TIME: 5–10 minutes

- To help students review goals and develop the work value of perseverance.
- Follow the steps of **Routine 14: The 2 to 4 Discussion.**
- Go around the classroom and listen to the pairs/groups while they are talking. Give help, if needed. Make sure students are reviewing some previous knowledge.

REVIEW

AIM: To check and consolidate the knowledge that students should have learned today.

TIME: to be completed at home

- Follow the steps for **Routine 16: Family Test.**

SELF-ASSESS

AIM: To help students complete a truthful self-assessment and find the assistance they need to further develop; to encourage critical thinking.

TIME: to be completed at home

- Follow the steps for **Routine 17: 3-2-1**

LESSON 7 pp. 72–73



COMPREHENSION

AIM: To learn about the tools associated with a graphics software program such as Paint.

TIME: 5–7 minutes

1 Look and answer

1. Read aloud the directions and then have students write an example of when they might use each tool.
2. Help students check their answers by creating an answer key on the board. (Suggested answers: **1. To erase all or part of an image. 2. To draw. 3. To insert a text box. 4. To create a border. 5. To paint or fill in a color. 6. To create a line, whether straight or curved.**)

AIM: To familiarize students with various graphics editor tools; to have them reflect on how they might use it in a presentation.

TIME: 5–7 minutes

2 Look and answer

1. Read aloud the directions, then draw students' attention to the various icons representing different tools. Ask students to share what they know about each tool and how they might use it in a project of their own. Give students a few minutes to provide a written response to the prompt in the space provided. Circulate while students work and provide assistance as necessary. (Possible answers: **I would use the "cut" and the "paste "icons to change an image in my presentation. I would use the color palette to change the colors in my presentation if they needed to be more vibrant, for example, the colors of the title and the heads.**)
2. Direct students' attention to the photo at the top of page 73 and have them think of ways they could edit it. Read aloud the bulleted list of suggestions, then have students take notes on the steps they would go through and the tools they would use to accomplish the desired effects. Call on a few volunteers to share their notes with the class.

Learn by doing **LESSON 7** Graphic art

Comprehension

1 Look and answer

Look at the graphic tools from Paint. Write an example of when you might use each tool while creating an image to put into your presentation.

T

2 Look and answer

Answer the questions.

1. Look at some more graphic tools available in Microsoft Paint. Choose one tool that you would like to use to help you create an image to put into a presentation. Describe how you could use this tool to help you to create it.

Aa

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2. Look at the photo. Think of ways you could add effects to it. For example:



- make the photo look like night
- make the photo more/less colorful
- brighten the photo
- make the photo simpler/less cluttered

Write what you would do and the steps you would take. You can ask your teacher for help.

Critical Thinking

3 Think and write

Answer the questions.

1. Imagine a scene you want to draw or paint but don't have the tools you need to do so. Describe it below.

2. How could you create that scene using Paint?

4 Compare and contrast

Compare your answers for the activity above with a partner. Did you write about using the same tools/programs?

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CRITICAL THINKING

AIM: To apply what students have learned about graphic tools and editors to a scene from their own imagination.

TIME: 4–6 minutes

3 Think and write

1. Read the directions aloud. In the space provided, have students provide a written description of a scene they have wanted to draw or paint.
2. Ask How could you create that scene using Paint? Have students think about it for a moment and then write about the tools they could use in creating that scene.

AIM: To compare and contrast the process of creating a scene in Paint with the process of another student.

TIME: 4–6 minutes

4 Compare and contrast

1. Form pairs of students. Have partners compare their notes and discuss the different tools they would use to create their scene.
2. When they are finished, have students take a few notes in the space provided, explaining what they learned while sharing ideas with their partner.

EXTENSION ACTIVITIES

1. Have students design and create the scene that they wrote about and discussed. They can take turns using a classroom computer, or you can take the class to the school library or resource center. Provide help as necessary. Display students' creations in your classroom and praise them for their efforts.
2. Some students may be interested in learning more about the job of a graphic designer. Guide them to useful resources by helping them do an online search with terms such as "graphic designer job description" or "what do graphic designers do."

LESSON 8 pp. 74–75

Creating a Powerpoint presentation

OBJECTIVES

- Discuss the elements of a presentation.
- Discuss PowerPoint features.
- Present information on a specific topic using PowerPoint.

LIFE SKILLS

- Learning to live together: means of communication
- Learning to do: creating a set of instructions

VALUES

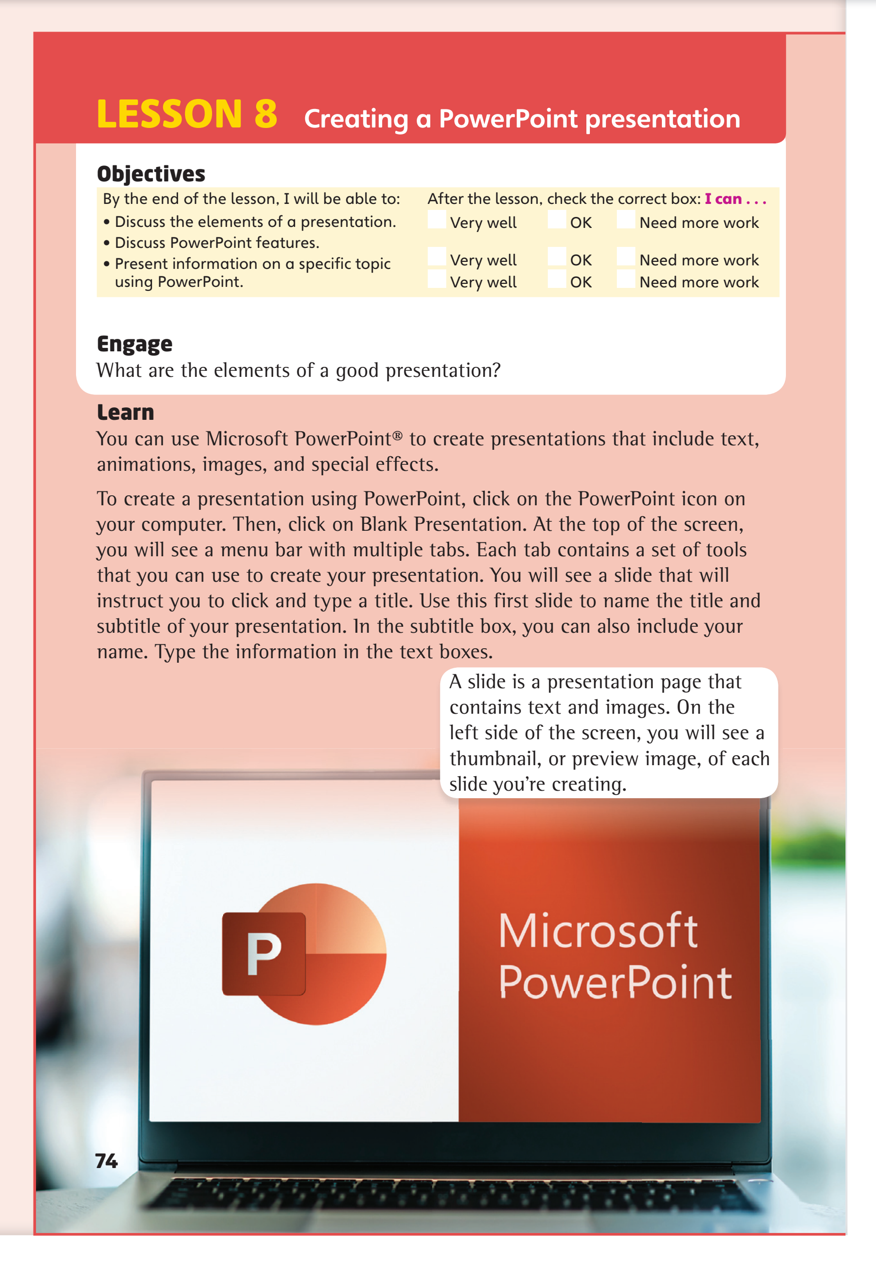
- Work values: perseverance
- Personal values: independence

ISSUES AND CHALLENGES

- Globalization issues: technological awareness

MATERIALS NEEDED

- Writing paper, pens, or pencils (Explore)
- Computers or tablets with Microsoft PowerPoint software (Teaching Tip, Home-school connection)



LESSON 8 Creating a PowerPoint presentation

Objectives

By the end of the lesson, I will be able to:	After the lesson, check the correct box: **I can . . .**		
• Discuss the elements of a presentation.	Very well	OK	Need more work
• Discuss PowerPoint features.			
• Present information on a specific topic using PowerPoint.	Very well	OK	Need more work
	Very well	OK	Need more work

Engage

What are the elements of a good presentation?

Learn

You can use Microsoft PowerPoint® to create presentations that include text, animations, images, and special effects.

To create a presentation using PowerPoint, click on the PowerPoint icon on your computer. Then, click on Blank Presentation. At the top of the screen, you will see a menu bar with multiple tabs. Each tab contains a set of tools that you can use to create your presentation. You will see a slide that will instruct you to click and type a title. Use this first slide to name the title and subtitle of your presentation. In the subtitle box, you can also include your name. Type the information in the text boxes.

A slide is a presentation page that contains text and images. On the left side of the screen, you will see a thumbnail, or preview image, of each slide you're creating.

OBJECTIVES

AIM: To encourage students to take responsibility for their own learning needs and paths.

TIME: 2–3 minutes

- Follow the steps for **Routine 2: What Do I Need to Do?** Write students' ideas on the board and remind students to pay attention to them during the lesson.

ENGAGE

AIM: To enable students to participate confidently and collaboratively in a class discussion that leads to the objectives of the lesson.

TIME: 2–5 minutes

- This activity explores communication skills.
- Follow the steps for **Routine 4: Think-Pair-Share.** To encourage more discussion, ask follow-up questions: Can you remember a multimedia presentation you saw that you really liked? What made it so good?

LEARN

AIM: To activate students' background schema and encourage them to anticipate the content so they can build context before reading.

TIME: 2–5 minutes

- The reading introduces students to different tools and features of Microsoft PowerPoint. Learning how to use these tools will be useful to students as they become more proficient users of graphic software programs.
- Follow the steps for **Routine 6: Preview.**
- Tell students to keep their guesses in mind as they read the article. When they finish, ask if their guesses were correct.

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<tr><td colspan="5">- Highlighting the vocabulary (PowerPoint presentation, new slide, layout icon, home menu, draw, transitions, animations, slide show), writing them on the board and underlining them or drawing a box around them in the Student's Book.
- Using demonstration while displaying Microsoft PowerPoint® presentations program.</td><td>Using the screen reader to display Microsoft PowerPoint® program for the blind.</td></tr>
</table>

Click New Slide to add another slide to your presentation. To choose the layout of each slide, click the Layout icon on the Home menu.

Adding text: To add text to your slide, click on the text box on the screen. Choose the font style and size you'd like to use. Type your text.

Adding visuals and effects: PowerPoint includes numerous visual tools to help make your presentation stand out.

- Design: Choose design options for each slide, including background colors.
- Draw: Access drawing tools.
- Transitions: Choose a visual effect to use between each slide.
- Animations: Choose animated effects for each slide.
- Slide show: Decide how you'd like to present and time each slide. You can view the presentation by clicking the "view show" icon or by clicking the F5 key on the keyboard.

Inserting pictures: To insert pictures, click on Insert, then Pictures. Choose the options you need from the menu bar. Once you choose your image, drag it with your mouse into the slide. You can also insert a picture using another program into your PowerPoint presentation.

Keep the following features in mind when creating your presentation:

- Avoid wordy paragraphs or sentences.
- Be sure to use a font size and style that is readable.
- Use relevant images instead of text whenever possible.

Practice your presentation in advance. Be engaging and encourage audience participation.

Explore

It's time to create a presentation on the topic of your choice from Lesson 3. Break down what you'll need to do. Remember to organize your notes from your online search. Decide how to include drawings or photos from Paint. Decide how you'll use PowerPoint features to make your presentation stand out. Finally, be sure to write down your ideas so you have step-by-step instructions to help you create your presentation.

Review

1. Discuss the features of PowerPoint.
2. Why might PowerPoint be a better choice for a presentation than Word or Excel?

Self-assess

Go to the Objectives at the beginning of the lesson.
Check the correct I can . . . box.

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BE THE EXPERT

Microsoft PowerPoint was first released in 1987 for use with Apple Macintosh computers only. It soon became a core component of the Microsoft Office Suite, which also includes Microsoft Excel and Microsoft Word. PowerPoint is now available on a wide array of platforms and devices, including Windows, iOS, Android, and via web access.

TEACHING TIP

Give students a training session in how to use Microsoft PowerPoint. (There are many tutorials available on YouTube®.) Afterwards, assign small groups of students to classroom computers or tablets. Then, using a computer connected to a smartboard, demonstrate how to use the tools that were described in **Learn**, and guide students in creating a simple presentation.

HOME-SCHOOL CONNECTION

Life Skill: Globalization values: awareness of technology

Have students share what they learned about PowerPoint with family members. If students have computers or tablets at home, they can demonstrate what they have learned by giving family members a short presentation.

EXPLORE

AIM: To enable students to work quickly, creatively, and collaboratively to generate ideas; to lead an activity based on their ideas to meet objectives.

TIME: 10 minutes

- To help students prepare for their presentations.
- Follow the steps of **Routine 13: Brainstorm.**
  1. Introduce the **Explore** topic. Read the instructions aloud.
  2. **Say** Now we're going to think of lots of ideas, quickly, without stopping!
  3. Have students sit in groups of three.
  4. **Say** One person in the group needs a piece of paper and a pen (or pencil). He or she will write your group's ideas down on the paper.
  5. **Say** You have ten minutes to write down all of the ideas you can think of. Don't stop!
  6. **Say** Go! The activity begins. After ten minutes, call Stop!
  7. Give students time to read the ideas on their piece of paper.
  8. Encourage students to put their ideas in order so that they have step-by-step instructions that can help them create their presentation.

REVIEW

AIM: To check and consolidate the knowledge that students should have learned today.

TIME: 5–10 minutes

- Follow the steps for **Routine 15: Test a Partner.**

SELF-ASSESS

AIM: To help students complete a truthful self-assessment and find the assistance they need to further develop.

TIME: to be completed at home

- Follow the steps for **Routine 18: Promise!**

LESSON 8 pp. 76–77



LIFE SKILLS

AIM: To plan the main sections of a PowerPoint presentation.

TIME: 7–10 minutes

1 Think and answer

1. Read aloud the directions and then have students take notes on each section of their presentation. Have them refer to the notes they took for **Explore** in Lesson 3 and the **Explore** section of this lesson as well. Emphasize to them that they do not need to take notes on individual slides at this point. The purpose is for them to take notes on the main sections of their presentation.
2. In the space provided, have students take notes on how they resolve any problems or issues that may come up in connection with each section.

AIM: To plan the content and design of each slide of a PowerPoint presentation.

TIME: 7–10 minutes

2 Plan your slides

1. Have students take notes on each slide of their presentation. Ask What kinds of images will you include? What text will go with each image?

AIM: To create a PowerPoint presentation based on the notes and outlines that students have prepared.

TIME: 20–30 minutes

3 Create your PowerPoint presentation.

1. Read the directions aloud. Invite students to ask any questions they may have about the steps involved.
2. Allow students to take turns using classroom computers or tablets in creating their slide shows. (Alternatively, students might use computers in the school library or resource center.)
3. Provide technical assistance as necessary. If there are students in your class who are highly proficient in PowerPoint, you might also designate them as "coaches" that can help beginning students.



LESSON 8 Creating a PowerPoint presentation

Life skills

1 Think and answer

It's time to create your own PowerPoint presentation. Use the information you've gathered while researching your topic of choice from Lesson 3 to create your presentation.

1. First, let's plan. Break down what you'll need to do to create your presentation into smaller sections. Write each section.
2. Next, it's time to problem-solve. Write about how you will complete each section.

2 Plan your slides

Write what you will include on each slide.

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3 **Create your PowerPoint presentation**

Finally, it's time to create your presentation. Be sure to do the following:

- Double-check that your sources are accurate.
- Cite your sources.
- Have a clear idea of the design you'd like to have.
- Determine how much text you want to include on a slide. Remember, you want to limit the number of words on each slide to make them easy to read.
- Decide how to break up the information you're including on each slide.
- Include visuals in your presentation.

Remember, you can include texts, images, and elements from other Microsoft 365 programs to create your PowerPoint presentation. For example:

- Tables, images, symbols, and texts from Word.
- Graphs, charts, and tables from Excel.
- Images from Paint.

ICT and me

4 **Think and answer**

Congratulations on creating a PowerPoint presentation! Now share your thoughts on the experience.

1. How did you use problem-solving skills to help you to create your presentation?

____
____
____

2. Explain the choices you made when it came to:
   Text size and style: ______________________________
   ____
   Use of graphic tools: ______________________________
   ____

3. Talk to a partner about the success of each of your presentations. How were your presentations similar? How were they different? What will each of you do differently next time?

____
____
____
____

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ICT AND ME

AIM: To reflect on the steps that students went through in creating their PowerPoint presentation.

TIME: 4–6 minutes

4 Think and answer

1. Read the first question aloud. Give students a few moments to write down their responses to it.
2. In a similar way, have students take notes on the choices they made in regards to text size, styling, and the use of graphic tools.
3. Form pairs of students. Have students talk to each other about sources, similarities, and differences between their presentations. In the space provided, have them take notes on what they will do differently next time.

EXTENSION ACTIVITIES

1. Have students present their slide shows to the class. Remind them to maintain eye contact with the audience, to speak loudly enough for all to hear, and to vary their pacing.
2. Some students may also be interested in presenting their slide shows to other classes. Make arrangements with the school librarian or with the resource center so that other students can come listen to the presentations during a designated time.

REVIEW Theme 4 pp. 78–79

VOCABULARY

AIM: To reinforce the acquisition of key vocabulary and concepts related to problem solving, algorithms, and coding.

TIME: 5–7 minutes

1 Write and compare

1. Read the directions aloud, then form pairs of students so that students can work out their answers together.
2. When pairs are finished, invite students to share their answers. Confirm or modify their responses as necessary. (Suggested answers: **1. "Steps" refers to the separate actions you have to go through in solving a problem. "Trial and error" is the process of trying different methods to solve a problem until one of them is successful. 2. An algorithm is a series of steps that explain how to do a task. Coding is the process of writing computer programs. 3. A slide is one panel in a slide show, whereas a thumbnail is a miniaturized version of a slide that shows its position in the presentation.**)

REVIEW QUESTIONS

AIM: To review key concepts and information related to the PowerPoint slide shows and other presentation software.

TIME: 5–7 minutes

2 Read and answer

1. Read the directions aloud. Tell students that there may be more than one answer to the questions. Allow students to team up with a classmate so that they can work out their answers together.
2. When pairs are finished, invite students to share their answers. Provide feedback, confirming or modifying answers as necessary. (Suggested answers: **1. Breaking down a problem into smaller steps is an efficient way of finding a solution. 2. When designing a poster, you should consider text size, styling, and images. 3. Images are more interesting to look at than a huge block of text. 4. Answers will vary. 5. One way to add an image or graphic to Microsoft Word or PowerPoint is to click on the Insert drop-down menu to see the different options. 6. Problem solving is related to coding in the sense that they both break down a task into smaller steps. 7. Three tools you can use in Paint or Word include Select, Airbrush, and Erase. 8. Three visual tools you can use in PowerPoint include New Slide, Layout, and Insert Picture.**)

REVIEW Theme 4

Vocabulary

1 Write and compare

Write a sentence for each set of words to explain the connection between them. Then compare your sentences with a partner.

1. steps and trial and error

___

2. algorithm and coding

___

3. slide and thumbnail

___

Review Questions

2 Read and answer

1. Explain why taking steps is an important part of problem-solving.
___
2. What digital concepts should you consider when creating a poster?
___
3. How do images make a presentation better?
___
4. Write a short algorithm for an everyday task.
___
5. Give instructions on one way to add an image or graphic to Microsoft Word or PowerPoint.
___
6. Explain how problem-solving is related to coding.
___
7. List three tools you can use in Paint or Word to create your own drawings.
___
8. List three visual tools you can use in PowerPoint.
___

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Critical Thinking

3 Think and answer

1. How can you use problem-solving to help you if you're having difficulty using the Microsoft 365 program?

2. Imagine you are about to create a PowerPoint presentation. Break down the steps you might take to create it.

3. Experts say that learning how to code can make you a more creative person. Think about what you've learned about coding. Do you agree? Why or why not?

Essential Question

4 Think and complete

Think about the information that you have learned in this theme.

How does it help you to understand how to use different software and techniques to create digital presentations?

After studying this theme, I know that I can use different software and techniques to create digital presentations because

Activity

5 Research, create, and show

How can you use problem-solving, breaking things into steps, trial and error and algorithms to carry out a task? How might you represent this in code or in a flowchart? Make this into a presentation using the techniques in (4) to show to the class.

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CRITICAL THINKING

AIM: To review key concepts and information related to coding and the use of presentation software.

TIME: 5-7 minutes

3 Think and answer

1. Read aloud the questions and give students time to work out their responses independently. Tell students that there are no right or wrong answers. The questions are asking them to reflect on their own experience and thought processes.
2. When students are finished, use the questions as a way of reviewing key concepts. Invite students to share their responses to each question and provide feedback as appropriate.

ESSENTIAL QUESTION

AIM: To reflect on the Essential Question and respond to it in writing.

TIME: 7-10 minutes

4 Think and complete

1. Read aloud the directions. Have students work independently in completing the sentence frame.
2. When students are finished, form pairs or small groups. Encourage group members to share their completed sentences with the group.
3. After the group discussions, invite a few students to share their sentences with the class.

ACTIVITY

AIM: To reflect on the **Essential Question** and respond to the question in writing.

TIME: 20-25 minutes

5 Research, create, and show

1. Read aloud the directions. Help students prepare for the activity by leading them in a brainstorm of different tasks.
2. Say Choose one of the topics from the list that you think is the most interesting. Then make a presentation showing how you can use problem solving, breaking things down into steps, trial and error, and algorithms to carry out this task.
3. Have students take turns using classroom computers to create their presentations.
4. Give students the opportunity to show their presentations to the class.

PROJECT Term 2 pp. 80–81

AIM: To work collaboratively in a group. To brainstorm ideas and gather information. To plan how to complete the project and then provide the results. To present to the class a project on Egyptian tourism awerness.

TIME: 60 minutes

The project is intended to revise and consolidate what students have learned throughout the term. They should be encouraged to work in groups and ensure that each member of the group takes an active role in preparing and delivering the presentation.

For teachers, the project offers an opportunity to assess students' progress on both ICT topics and on collaborative working.

The topic of the project is in the Student's Book, but if preferred, an alternative topic can be chosen from the list below:

- How does internet communication impact our lives? What are our responsibilities as digital citizens?
- How can we use digital applications to present our ideas? How can we use them to assist us with simple algorithms?

1 Read the title of the project carefully and think about what you need to find out.

1. Read the directions aloud, explaining to students that they will conduct a project that explores the most important projects in tourism awareness made by the Egyptian government.
2. Give an example of an important project in tourism awareness made by the Egyptian government.

2 Put your group together. Who are you working with?

1. Form diverse groups of mixed abilities. Ideally, advanced students will be grouped with students of lower proficiencies so that they can take on different roles and help each other.
2. Have group members sign their names in the spaces provided.

PROJECT Term 2

1 Read the title of the project carefully and think about what you need to find out.

Tourism awareness

Research the most important projects made by the Egyptian government in this field. Present the results of your research to the class.

2 Put your group together. Who are you working with?

- ______________________
- ______________________
- ______________________
- ______________________

3 Brainstorming ideas

What type of presentation will you create? How will you use both images and text in your presentation? What do you need to do to make your presentation a success?

____

____

____

____

4 Gather information

What sources will you use to gather your information?		What information do you need to know?
Search engines	☐	______________________
The Egyptian Knowledge Bank (EKB)	☐	______________________
The school library	☐	______________________
Other:		______________________

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3 Brainstorming ideas

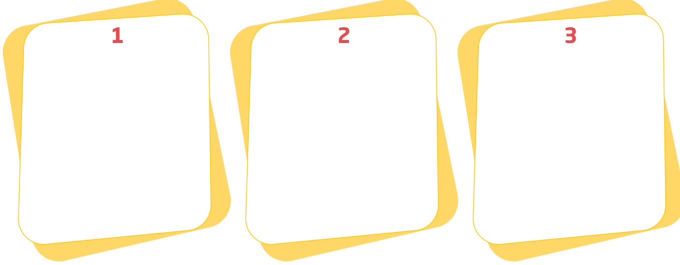
1. Have group members sit together and discuss the questions.
2. Ask a "scribe" to take notes in the space provided, noting what type of presentation the group will create, how they will use a combination of images and text, and what the group thinks will be necessary to make the presentation a success.

4 Gather information

1. Have group members sit together and discuss the questions.
2. Have the scribe tick the boxes next to the sources the group will use to gather their information and to take notes in the space provided, noting what information the group will need to know.

5 Our plan

Write down your plan for doing the project. Plan the steps.



6 Our final product

Provide results of your research here.





7 Presenting our work to the class

How can we present the work? What will we say? What will we avoid doing?

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5 Our plan

1. Have groups discuss their plan for doing the project. They should break the project down into three major steps, as indicated by the graphic organizer.
2. When they have finalized their plan, have the scribe write down their plan in the spaces provided by the graphic organizer.
3. Visit each group and take a look at their plan. Give feedback if you think they are missing any important steps.

6 Our final product

1. Have students discuss the results of their research. Ask What did you find out? How do you think you might present the information to the class?
2. Tell the group to collaborate in summarizing the results of their research in the space provided.

7 Presenting our work to the class

1. Have groups prepare for their presentation by reading the question and responding to it in writing.
2. Provide students the resources that they will need to complete their project. Provide assistance and feedback as needed throughout each step of the process.
3. Designate a time and day for groups to present their projects to the class. Congratulate them on the work they have done.

Notes

Notes

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Notes

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